Multi-dimentional Pain Assessment and Psychosocial Interventions

MiCCSI

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Disclosures

- Consultant to Community Health Focus Inc.
- President of the American Pain Society
- Chair of Steering Committee reviewing grants for APS sponsored by Pfizer
- Funded for research by NIH

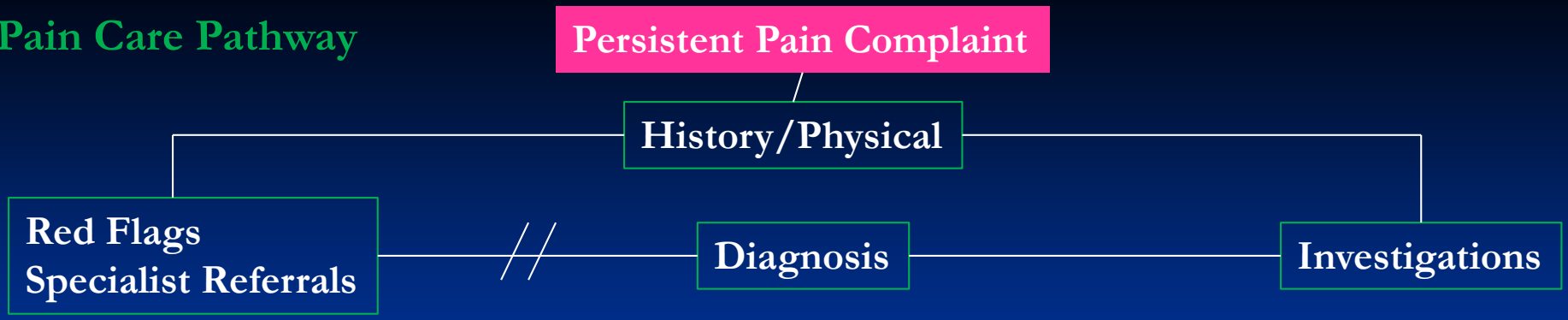
There will be no use of off-label medications in this presentation.

Pain Care Pathway

Persistent Pain Complaint

Adapted from Macfarlane et al. Ann Rheum Dis, 2017;76:318-328; Lee, et al., BJA 2014; 112:16-24; Peterson et al, VA ESP Project #09-199, 2017

Pain Care Pathway



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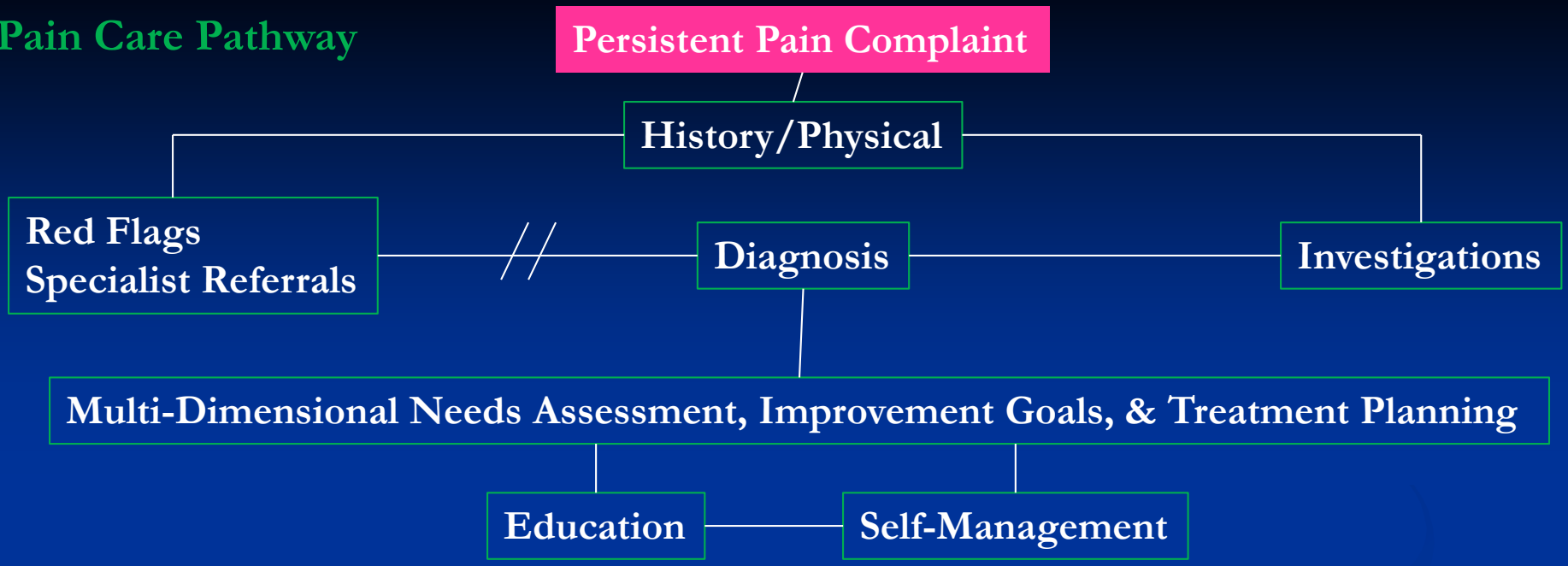
Pain Care Pathway



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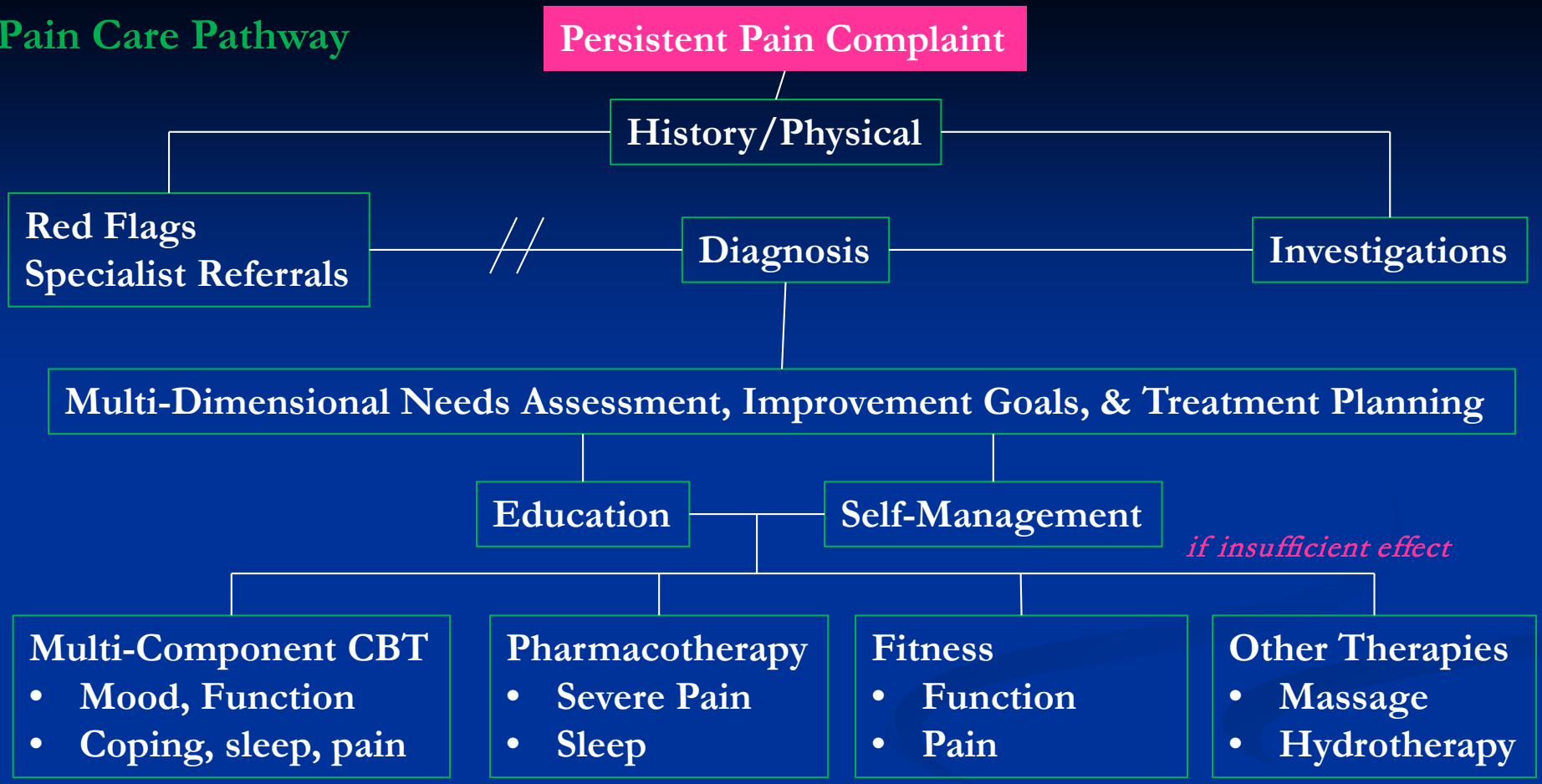

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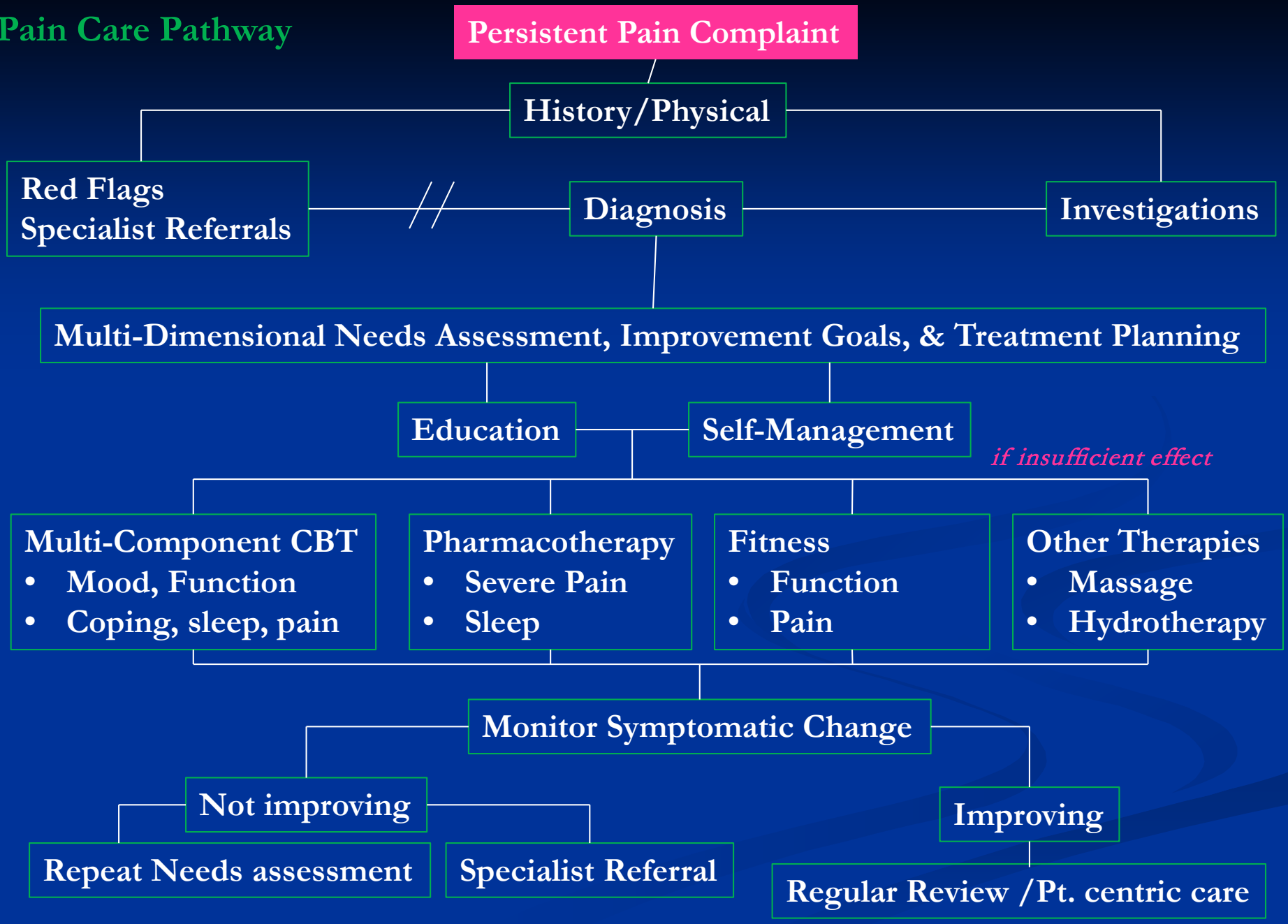

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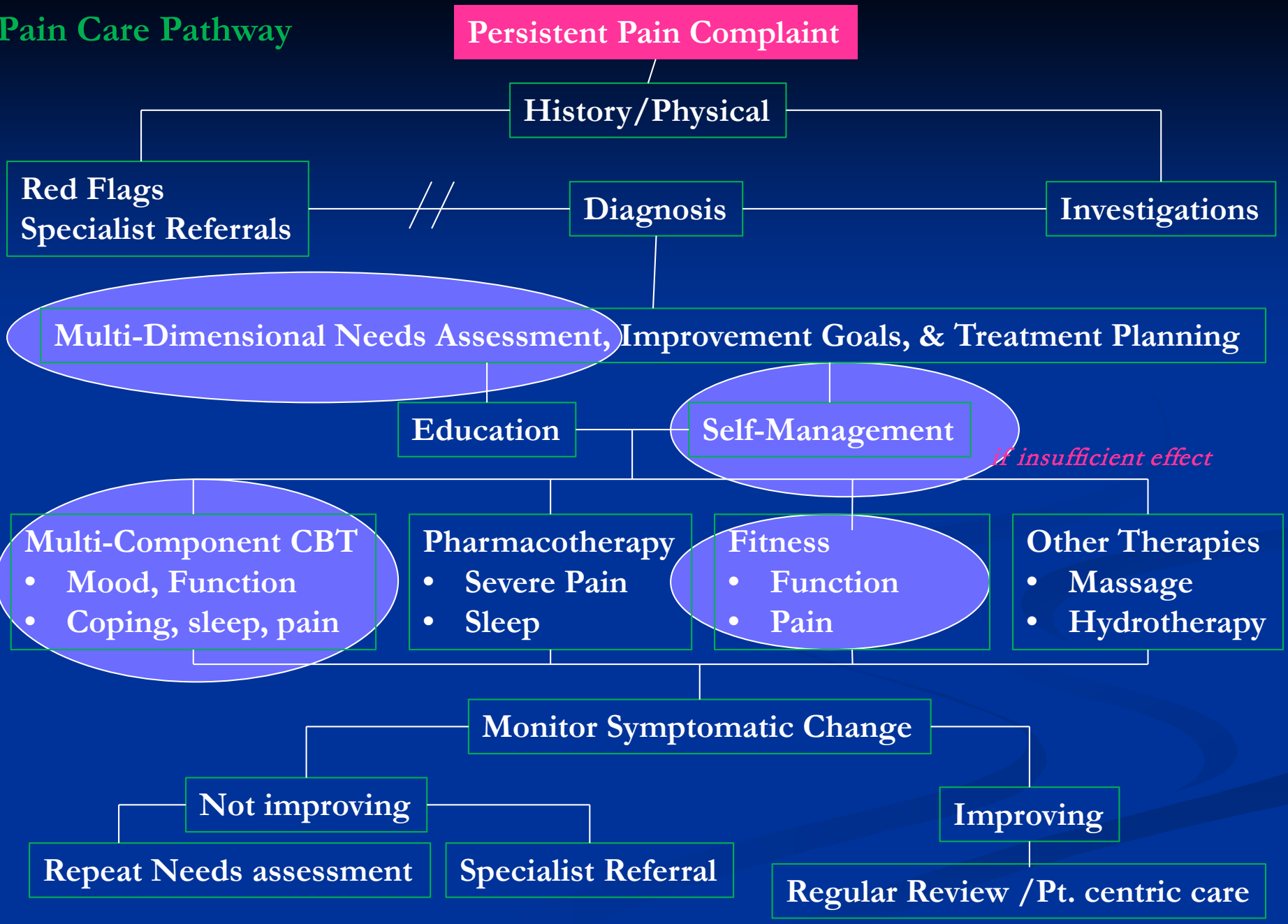
Pain Care Pathway



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Traditional Pain Assessment

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9

Intensity

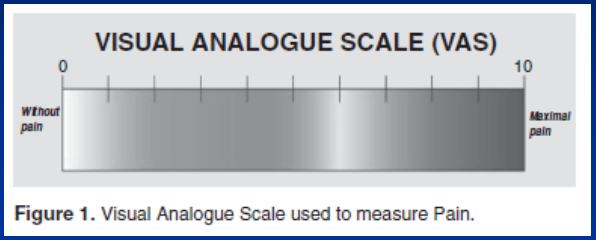
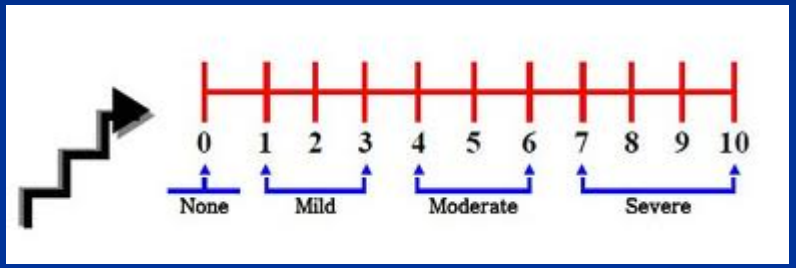
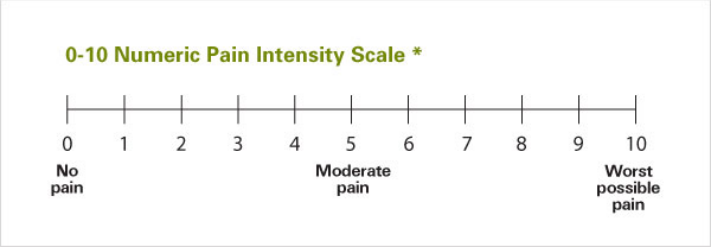


Figure 1. Visual Analogue Scale used to measure Pain.





Verbal Rating Scale: **Discomfort Rating**

0- Pain or Discomfort - none

1- Pain or Discomfort - I am aware of it, I think about it

2- Pain or Discomfort - I am aware of it, I think about it but I can ignore it at times.

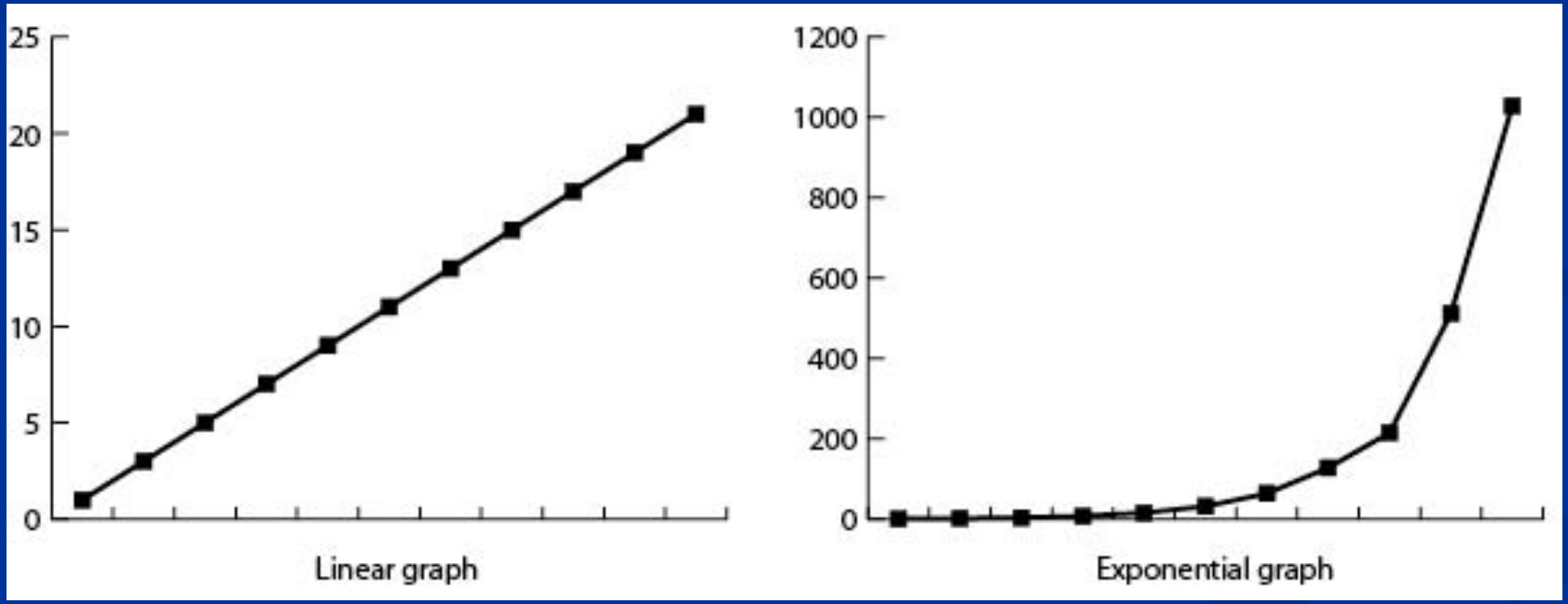
3- Pain or Discomfort - I can't ignore it, but I can do my usual activities.

4- Pain or Discomfort - It is difficult for me to concentrate; I can only do easy activities.

5- Pain or Discomfort - Such that I cant do anything.

Jensen MP, Karoly P. Self-report scales and procedures for assessing pain in adults. In: Turk DC, Melzack R, eds. Handbook of Pain Assessment. New York, NY: the Guilford Press; 2011:19-44.

Psychophysical events like sensory perception and pain follow exponential curves



0-10 point NRS for pain

CCT

No Pain

Worst Pain

IRT

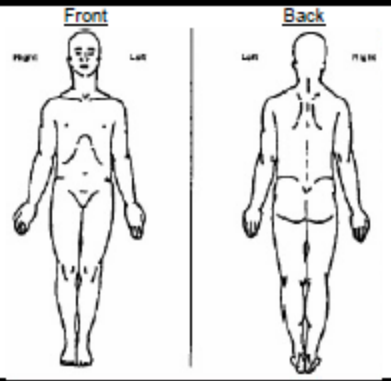
Brief Pain Inventory

Brief Pain Inventory (Short Form)

1. Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?

☐ Yes ☐ No

2. On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3. Please rate your pain by marking the box beside the number that best describes your pain at its worst in the last 24 hours.

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

No Pain — Pain As Bad As You Can Imagine

4. Please rate your pain by marking the box beside the number that best describes your pain at its least in the last 24 hours.

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

No Pain — Pain As Bad As You Can Imagine

5. Please rate your pain by marking the box beside the number that best describes your pain on the average.

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

No Pain — Pain As Bad As You Can Imagine

6. Please rate your pain by marking the box beside the number that tells how much pain you have right now.

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

No Pain — Pain As Bad As You Can Imagine

7. What treatments or medications are you receiving for your pain?

8. In the last 24 hours, how much relief have pain treatments or medications provided? Please mark the box below the percentage that most shows how much relief you have received.

0% ☐ No Relief — 10% ☐ — 20% ☐ — 30% ☐ — 40% ☐ — 50% ☐ — 60% ☐ — 70% ☐ — 80% ☐ — 90% ☐ — 100% ☐ Complete Relief

9. Mark the box beside the number that describes how, during the past 24 hours, pain has interfered with your:

A. General Activity

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

B. Mood

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

C. Walking ability

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

D. Normal Work (includes both work outside the home and housework)

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

E. Relations with other people

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

F. Sleep

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

G. Enjoyment of life

☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

Does Not Interfere — Completely Interferes

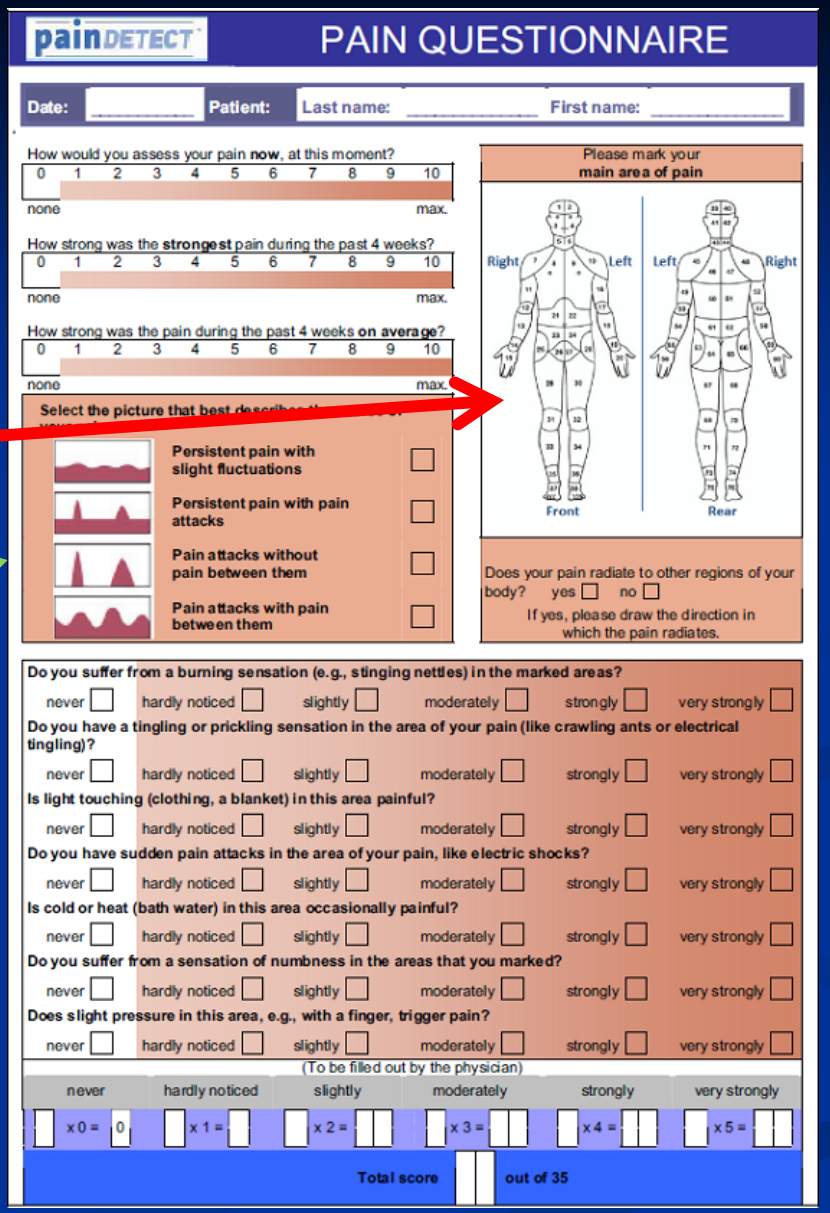
Cleeland, C. (2009). *The Brief Pain Inventory: User Guide*. Houston , TX: MD Anderson Cancer Center.

Intensity

Distribution

Temporality

Quality



painDETECT PAIN QUESTIONNAIRE

Date: Patient: Last name: First name:

How would you assess your pain **now**, at this moment?
0 1 2 3 4 5 6 7 8 9 10
none max.

How strong was the **strongest** pain during the past 4 weeks?
0 1 2 3 4 5 6 7 8 9 10
none max.

How strong was the pain during the past 4 weeks **on average**?
0 1 2 3 4 5 6 7 8 9 10
none max.

Select the picture that best describes

- Persistent pain with slight fluctuations
- Persistent pain with pain attacks
- Pain attacks without pain between them
- Pain attacks with pain between them

Please mark your **main area of pain**

Right Left Left Right
Front Rear

Does your pain radiate to other regions of your body? yes no
If yes, please draw the direction in which the pain radiates.

Do you suffer from a burning sensation (e.g., stinging nettles) in the marked areas?
never hardly noticed slightly moderately strongly very strongly

Do you have a tingling or prickling sensation in the area of your pain (like crawling ants or electrical tingling)?
never hardly noticed slightly moderately strongly very strongly

Is light touching (clothing, a blanket) in this area painful?
never hardly noticed slightly moderately strongly very strongly

Do you have sudden pain attacks in the area of your pain, like electric shocks?
never hardly noticed slightly moderately strongly very strongly

Is cold or heat (bath water) in this area occasionally painful?
never hardly noticed slightly moderately strongly very strongly

Do you suffer from a sensation of numbness in the areas that you marked?
never hardly noticed slightly moderately strongly very strongly

Does slight pressure in this area, e.g., with a finger, trigger pain?
never hardly noticed slightly moderately strongly very strongly

(To be filled out by the physician)

never	hardly noticed	slightly	moderately	strongly	very strongly
x 0 = 0	x 1 =	x 2 =	x 3 =	x 4 =	x 5 =

Total score out of 35

Freynhagen R, Baron R, Gockel U, Tolle TR. painDETECT: a new screening questionnaire to identify neuropathic components in patients with back pain. Current medical research and opinion 2006;22:1911-20.

EMA Pain

Ex : Pain Diary

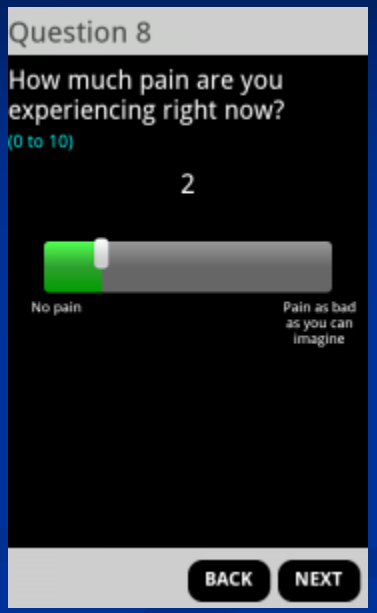
MONITORING PAIN DIARY

Instructions:

1. Keep a record of any pain you experience during any of the following periods with a 7 day diary.
2. Record how intense your pain was by rating it on a scale of 1 to 10 (1=not very painful to 10=highly painful).
3. Record what you were doing or the situation you were in when you experienced the pain.
4. Record your thoughts at the time of experiencing the pain.

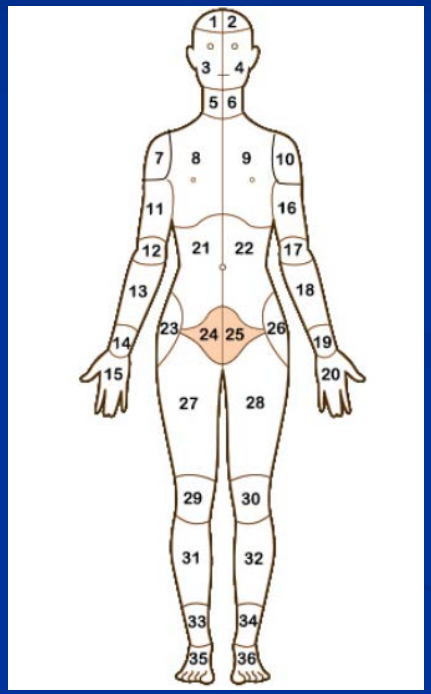
This will help you to develop more awareness about your experiences of physical pain to help you identify strategies and techniques to help manage pain.

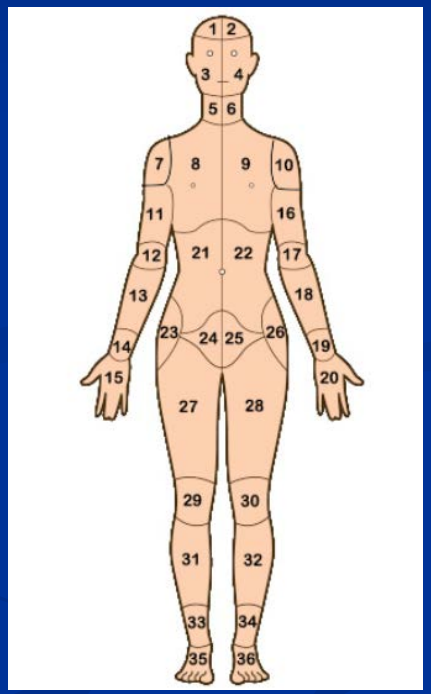
DAY	Brief description of type of pain	RATE 1-10	Situation/What you were doing		What you were thinking at the time	
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						



Focal vs Wide-Spread Pain

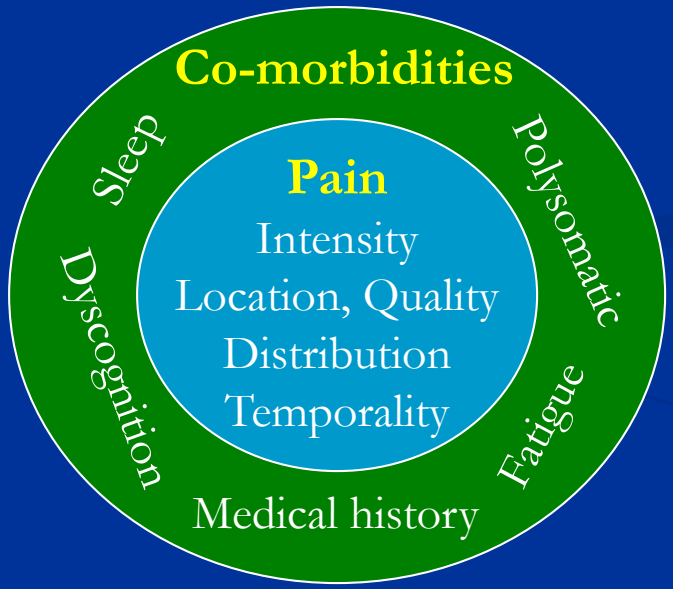
- Body Maps
- Assess for local Vs. Wide-spread pain
- In IC, only 19% focal





Nickel, JC. Clinical and psychological parameters associated with pain pattern phenotypes in women with interstitial cystitis/bladder pain syndrome. J Urol, 193 (1):138-44, (2015)

Domains of Pain Assessment

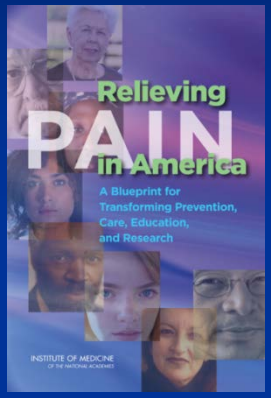


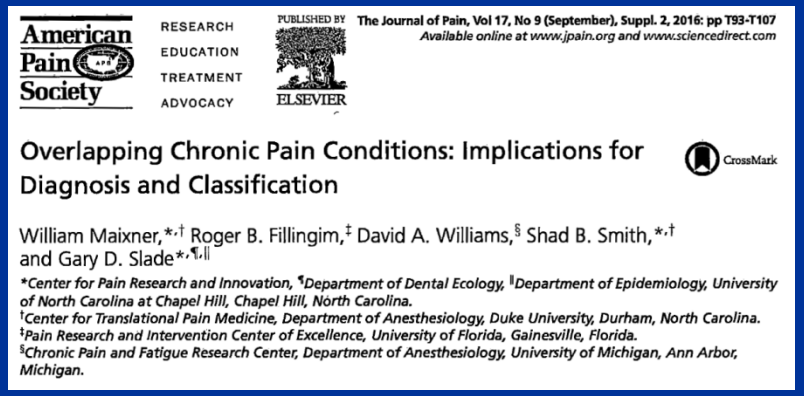
Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9

Common Characterization

- Demographics
- Family History
- Diagnostics
  - Specific to the complaint
  - COPCs
  - Substances
    - Opioids and opioids follow-up (phone)
    - Benzodiazepine
    - Cannabis
    - Concomitant Medications

Chronic Overlapping Pain Conditions (COPCs)





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Overlapping Chronic Pain Conditions: Implications for Diagnosis and Classification

CrossMark

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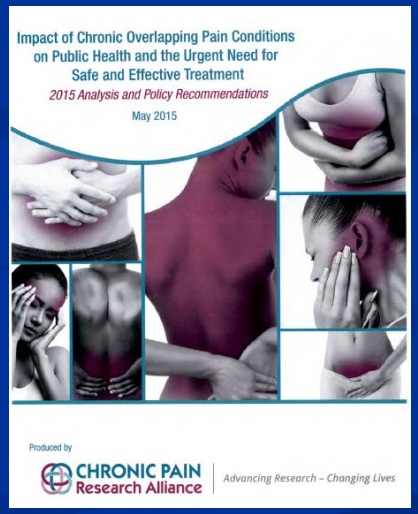


Chronic Overlapping Pain Conditions

COPCs	US Prevalence
Irritable Bowel Syndrome	44 Million
Temporomandibular Disorder	35 Million
Chronic Low Back Pain	20 Million
Interstitial Cystitis / Bladder Pain Syndrome	8 Million
Migraine Headache	7 Million
Tension Headache	7 Million
Endometriosis	6 Million
Vulvodynia	6 Million
Fibromyalgia	6 Million
Myalgic Encephalopathy / CFS	4 Million

Veasley, C. et al (2015). White paper from the Chronic Pain Research Alliance. Maixner, W., Fillingim, R. B., Williams, D. A., Smith, S. B., & Slade, G. D. (2016). Overlapping Chronic Pain Conditions: Implications for Diagnosis and Classification. J Pain, 17(9 Suppl), T93-T107. doi: 10.1016/j.jpain.2016.06.002

Shared Neurotransmitters Explain

- The complexity of chronic pain presentation

- Sleep, Pain, Affect, Cognition, Energy

Ablin, Buskila & Clauw. Curr Pain Headache Rep 2009;13:343-9; Schrepf, A et al., JPain, 2017 (in press)

Medical History

- Demographics
- Co-morbid medical conditions
- Current Treatments
- Medical History
- Family History

Sleep

- Sleep Disturbances
  - PROMIS[1]
  - MOS[2]
  - PSQI[3]
- Sleep-related Impairment
  - PROMIS[1]

Dyscognition

- Perceived Problems
  - MASQ[4]
  - MISCI[5]

Fatigue

- Multidimensional Fatigue
  - MFI[6]
  - PROMIS[1]

Polysomatic Burden

- PILL[7]
- CMSI[8]
- FMness[9]
- CSI[10]

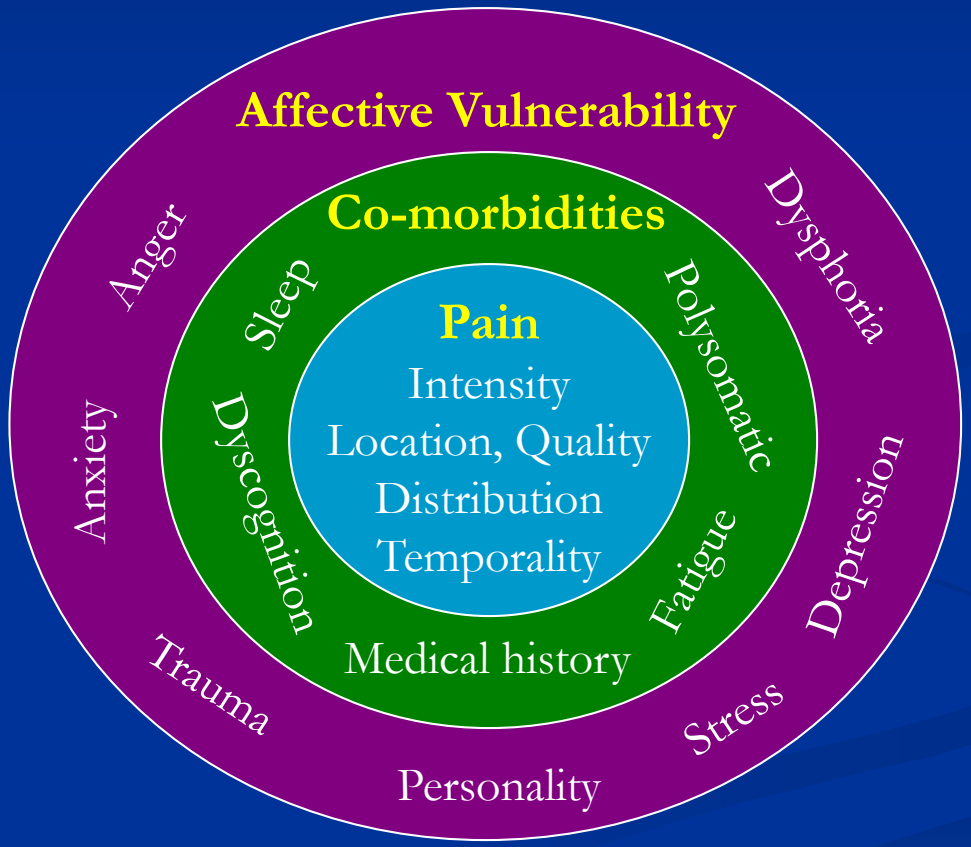
Sleep: [1]Cella D, et al. The Patient-Reported Outcomes Measurement Information System (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005-2008. J Clin Epidemiol. 2010;63(11):1179-94. [2]Allen RP, et al. Psychometric evaluation and tests of validity of the Medical Outcomes Study 12-item Sleep Scale (MOS sleep). Sleep medicine. 2009;10(5):531-9. [3]Buysse,D.J. et al. (1989). The Pittsburgh Sleep Quality Index (PSQI): A new instrument for psychiatric research and practice. Psychiatry Research, 28(2), 193-213. The detailed scoring instructions are at the end of this journal article.

Dyscognition: [4]Seidenberg M. et al. Development and validation of a Multiple Ability Self-Report Questionnaire. Journal of Clinical & Experimental Neuropsychology. 1994;16(1):93-104.; [5]Kratz AL, et al. Development and Initial Validation of a Brief Self-Report Measure of Cognitive Dysfunction in Fibromyalgia. The J Pain, 2015.

Fatigue: [6]Smets EM, et al. The Multidimensional Fatigue Inventory (MFI) psychometric qualities of an instrument to assess fatigue. Journal of Psychosomatic Research 1995;39:315-25.

Polysomatic burden: [7]Pennebaker JW. The psychology of physical symptoms. New York, New York: Springer-Verlag; 1982.; [8]Williams DA, et al. Advances in the assessment of fibromyalgia. Rheum Dis Clin North Am 2009;35:339-57.; [9]Wolfe F, et al. Fibromyalgia criteria and severity scales for clinical and epidemiological studies: a modification of the ACR Preliminary Diagnostic Criteria for Fibromyalgia. J Rheumatol 2011;38:1113-22. [10]Mayer TG, et al. The development and psychometric validation of the central sensitization inventory. Pain practice 2012;12(4):276-85.

Domains of Pain Assessment



Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9

Affect and Chronic Pain

IASP Definition of Pain:

An unpleasant *sensory and emotional* experience associated with actual or potential tissue damage or described in terms of such damage[1]

Affective Vulnerability:

Highly predictive of first onset of chronic pain (e.g., TMD).[2]

Neuroimaging Findings:

Compared to acute pain, chronic pain appears more like an emotional event than a sensory event.[3,4]

[1]IASP Pain Terminology. International Association for the Study of Pain Website. http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_ Definitions&Template=/CM/HTMLDisplay.cfm&ContentID=1728#Pain. Updated 2007. Accessed January 6, 2011; 2 Fillingim et al, Psychological factors associated with development of TMD: the OPPERA prospective cohort study. J Pain, 14(12 supp2), 2013:T75-T90; [3]Hashmi JA, et al, Shape shifting pain: chronification of back pain shifts brain representation from nociceptive to emotional circuits. Brain ,2013;136(Pt 9):2751-68; [4]Denk F, McMahon SB, Tracey I. Pain vulnerability: a neurobiological perspective. Nature neuroscience. 2014;17(2):192-200.

Negative Affect

- Depression/Dysphoria
  - CES-D[1]
  - PHQ-9[2]
  - PROMIS[3]
- Anxiety
  - STAI[4]
  - GAD-7[5]
  - PROMIS[3]
- Anger
  - STAXI[6]
  - PROMIS[3]

Trauma/Stress

- Trauma
  - CTES/RTES[7]
- Stress
  - PSS[8]

Personality

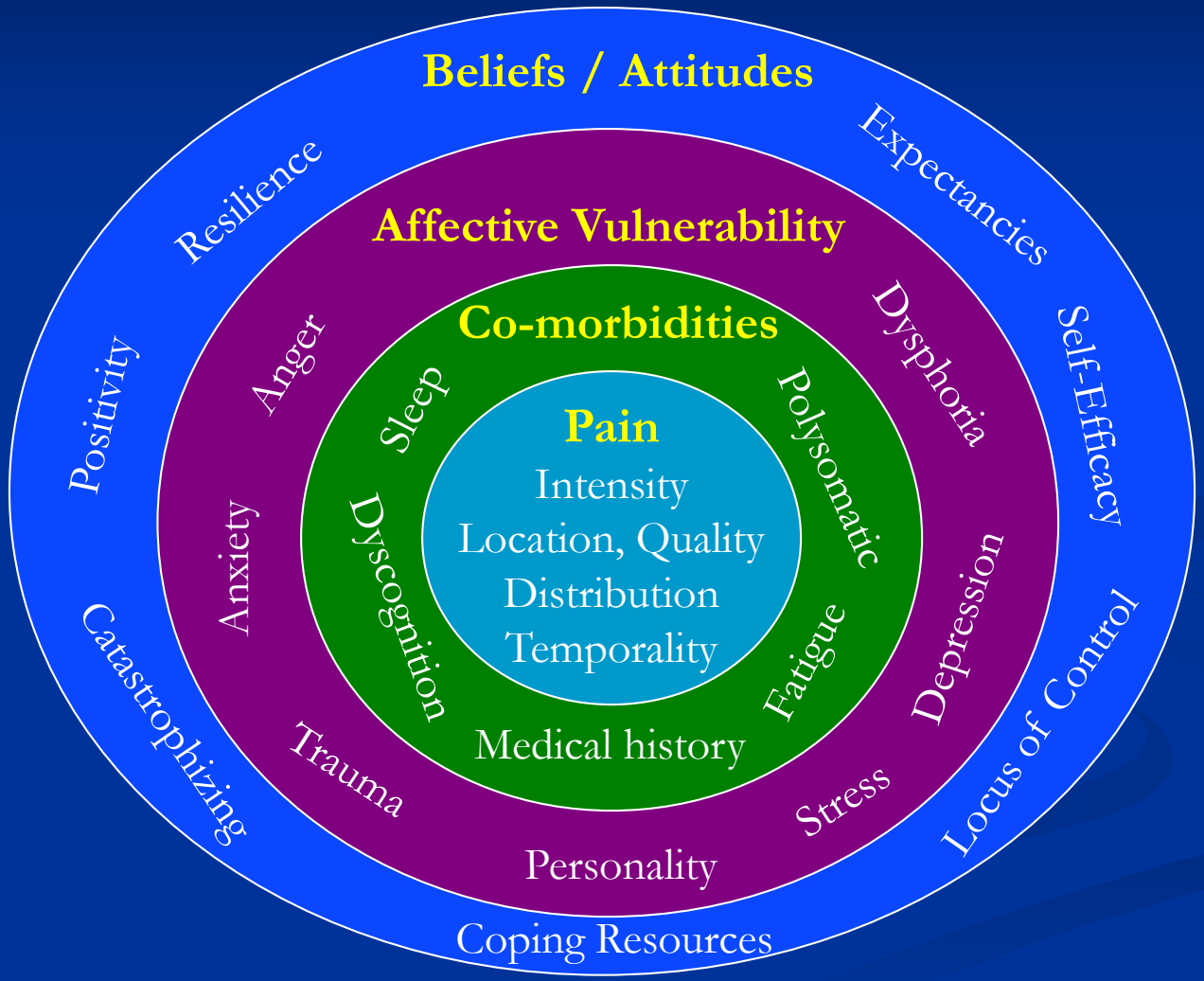
- 5 Factor Model
  - Neuroticism
  - Extroversion
  - Openness
  - Conscientiousness
  - Agreeableness
- IPIP[9]
- TIPI[10]

Negative Affect: [1]Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement 1977;1:385-401. [2]Kroenke K, et al. The PHQ-9: validity of a brief depression severity measure. JGenInternMed. 2001;16(9):606-13. [3]Cella D, et al. The Patient-Reported Outcomes Measurement Information System (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005-2008. J Clin Epidemiol. 2010;63(11):1179-94. [4]Spielberger CD, et al. Assessment of state and trait anxiety. Anxiety: psychobiological and clinical perspectives. Washington: Hemisphere/Taylor and Francis; 1991:69-83. [5]Spitzer RL et al. A brief measure for assessing generalized anxiety disorder: the GAD-7. Archives of internal medicine. 2006;166(10):1092-7. [6]Spielberger CD. STAXI-2: State-Trait Anger Expression Inventory - 2. Professional Manual. Odessa, FL: Psychological Assessment Resources (PAR), Inc.; 1999.

Trauma: [7]Pennebaker JW, et al. Disclosure of traumas and psychosomatic processes. SocSciMed. 1988;26(3):327-32.; [8]Cohen S, et al. A global measure of perceived stress. JHealth SocBehav. 1983;24(4):385-96.

Personality: [9]Goldberg, L. R., et al. (2006). The International Personality Item Pool and the future of public-domain personality measures. Journal of Research in Personality, *40*, 84-96.; [10]Gosling, S. D., et al. (2003). A Very Brief Measure of the Big Five Personality Domains. Journal of Research in Personality, *37, 504-528*.

Domains of Pain Assessment



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Pain Beliefs

- Multi-component
  - SOPA[1]
  - PBPI[2]
  - BBCA[3]
- Locus of Control
  - BPCQ[4]

Coping Resources

- Coping Strategies
  - CSQ[5]
  - CPCI[6]
- Catastrophizing
  - PCS[7]
- Self-Efficacy
  - PSE[8]

Expectancies

- Treatment Expectancy and credibility
  - TEC[9]

Beliefs: [1]Jensen MP, et al. Relationship of pain-specific beliefs to chronic pain adjustment. Pain. 1994;57(3):301-9.; [2]Williams DA. et al., Pain beliefs: Assessment and utility. Pain. 1994;59(1):71-8. [3]Jensen MP, et al. One- and two-item measures of pain beliefs and coping strategies. Pain. 2003;104(3):453-69. [4]Skevington SM. A standardized scale to measure beliefs about controlling pain (BPCQ): A preliminary study. Psychology and Health 1990;4:221-32.

Coping: [5]Rosenstiel AK, Keefe FJ. The use of coping strategies in chronic low back pain patients: Relationship to patient characteristics and current adjustment. Pain 1983;17:33-44; [6]Jensen MP, et al. The Chronic Pain Coping Inventory: development and preliminary validation. Pain. 1995;60(2):203-16. [7]Sullivan M, et al.. The Pain Catastrophizing Scale: Development and validation. Psychological Assessments 1995;7:524-32. [8]Lorig K, et al. Development and evaluation of a scale to measure perceived self-efficacy in people with arthritis. Arthritis & Rheumatism 1989;32:37-44.

Expectancies: [9]Smeets RJ, et al,. Treatment expectancy and credibility are associated with the outcome of both physical and cognitive-behavioral treatment in chronic low back pain. The Clinical journal of pain. 2008;24(4):305-15.

Resilience and Positive Affect

- Positive/Negative Affect
  - PANAS[1]
- Affect Balance[2]
- Hardiness
- Grit
  - Short Grit Scale[3,4]
- Optimism
- Determination/courage
- Satisfaction with life
  - SWL[5]
- Benefit Finding
- Gratitude
- Forgiveness
- Subjective Well-being
  - SWBS[6]
  - PROMIS Affect/Well-being[7]
- Sense of Coherence

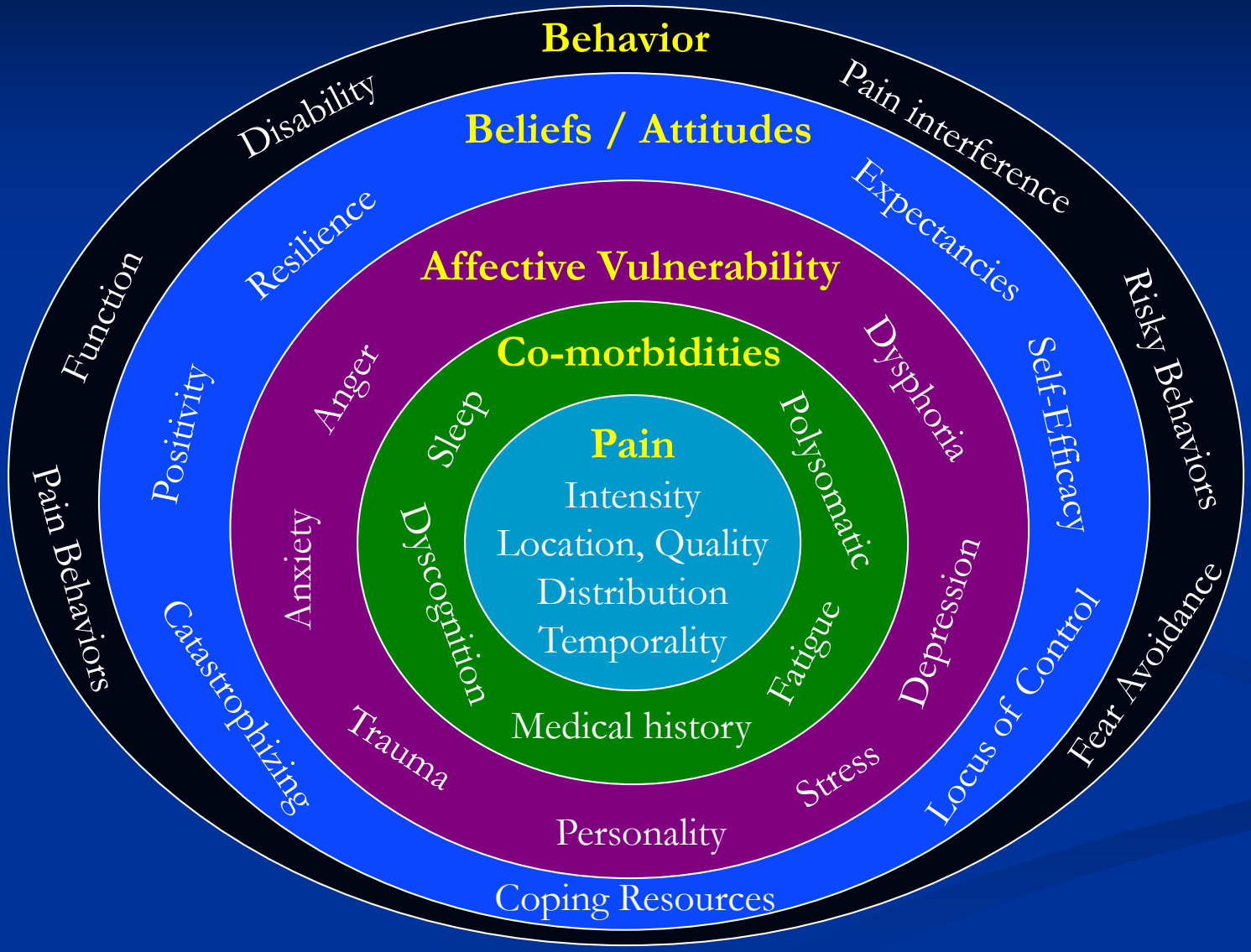
Acceptance

- CPAQ

Resilience and Positive Affect: [1]Watson D. et al. Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality & Social Psychology 1988;54:1063-70. [2]Hassett AL, et al. The relationship between affect balance style and clinical outcomes in fibromyalgia. Arthritis and Rheumatism. 2008;59(6):833-40. [3]Duckworth AL, et al, Grit: perseverance and passion for long-term goals. *Journal of personality and social psychology*. Jun 2007;92(6):1087-1101. [4]Duckworth AL, et al. Development and validation of the short grit scale (grit-s). *Journal of personality assessment*. Mar 2009;91(2):166-174. [5]Diener E, et al. The Satisfaction With Life Scale. *Journal of personality assessment*. Feb 1985;49(1):71-75. [6]Diener E. *Assessing Well-Being: The Collected Works of Ed Diener*. New York: Springer; 2009. [7]Cella D, et al. The Patient-Reported Outcomes Measurement Information System (PROMIS) developed and tested its first wave of adult self-reported health outcome item banks: 2005-2008. J Clin Epidemiol. 2010;63(11):1179-94

Acceptance: Fish RA, et al. Validation of the chronic pain acceptance questionnaire (CPAQ) in an Internet sample and development and preliminary validation of the CPAQ-8. Pain. 2010;149(3):435-43.

Domains of Pain Assessment



Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9

Functioning

- Multidimensional Functioning
  - SF-36[1]
  - WHO-DAS 2.0[2]
- Pain Interference
  - BPI[3] (interference)
- Disability
  - PDI[4]

Pain Behaviors

- PROMIS[5]

Fear Avoidance

- TSK[6]

Health Risk Behaviors

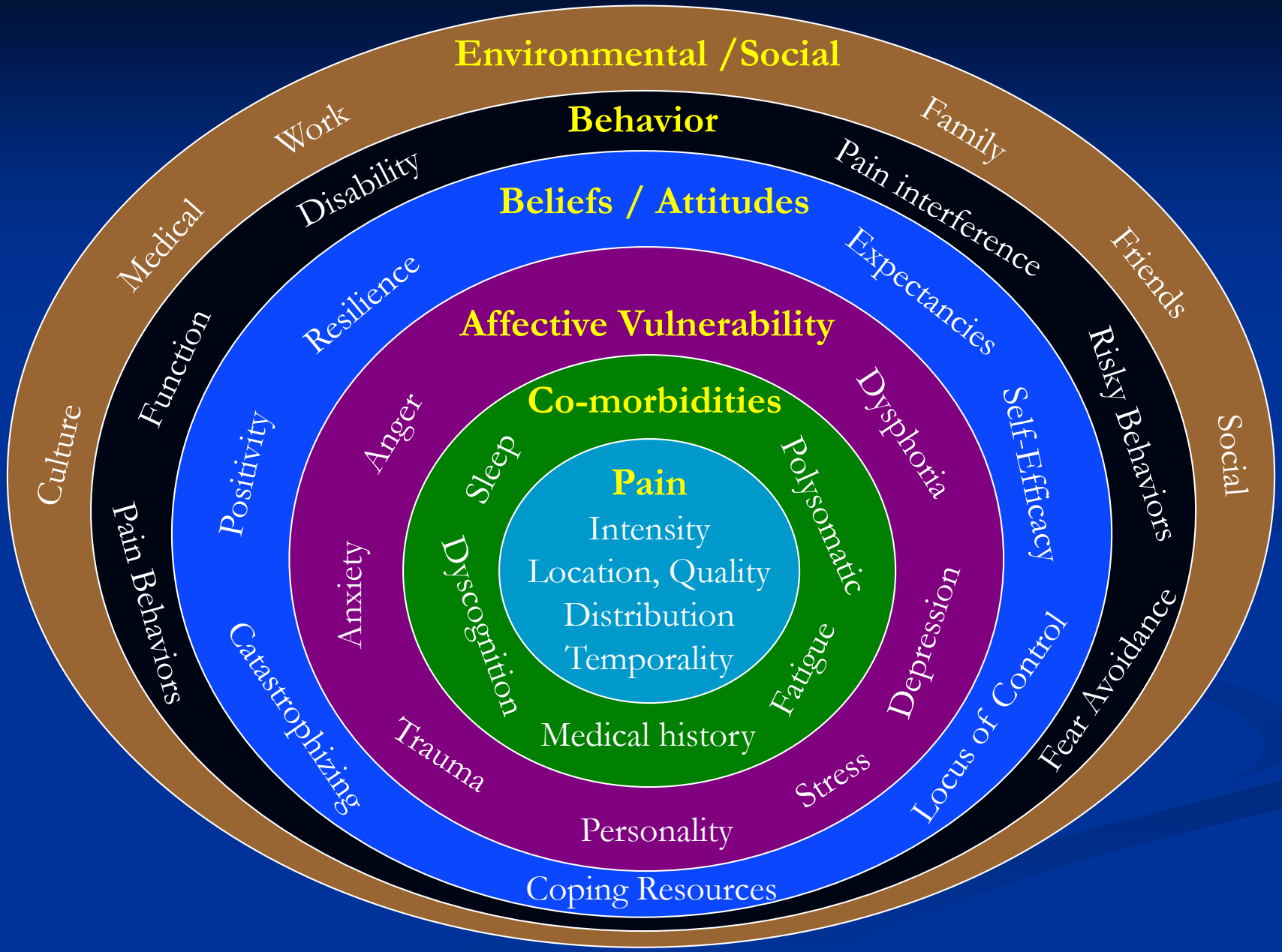
- Smoking[7]
- Alcohol[8]
- Recreational drugs[9]

Functional Status: [1]Ware JE, et al. How to Score Version Two of the SF-36r Health Survey. Lincoln, RI: QualityMetric, Inc.; 2000. [2]World Health Organization. Measuring health and disability: manual for WHO disability assessment schedule (WHODAS 2.0), World Health Organization, 2010, Geneva. [3]Cleeland C. The Brief Pain Inventory: User Guide. Houston , TX: MD Anderson Cancer Center; 2009. [4]Tait RC, et al. The Pain Disability Index: Psychometric properties. Pain. 1990;40(2):171-82.

Pain Behaviors and Fear Avoidance: [5]Revicki DA, et al. Development and psychometric analysis of the PROMIS pain behavior item bank. Pain. 2009;146(1-2):158-69. [6] Burwinkle, T., et al. (2005). Fear of movement: factor structure of the Tampa Scale of Kinesiophobia in patients with fibromyalgia syndrome. The Journal of Pain, 6(6), 384-391.

Health Risk Behaviors: [7]Heatherton TF, et al. The Fagerstrom Test for Nicotine Dependence: A revision of the Fagerstrom Tolerance Questionnaire. British Journal of Addiction. 1991;86(9):1119-27. [8]Ewing JA. Detecting alcoholism. The CAGE questionnaire. JAMA , 1984;252(14):1905-7 [9]Brown, R.L., and Rounds, L.A. Conjoint screening questionnaires for alcohol and drug abuse. *Wisconsin Medical Journal* 94:135-140, 1995.

Domains of Pain Assessment



Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9

Social

- Multicomponent Social Functioning
  - WHYMPI[1]
- Social Enfranchisement
  - PE[2]

Family

- Dyadic Adjustment
  - DAS[3]

Work

- Work Productivity/Impairment
  - WPAI[4]

Social: [1]Kerns RD, Turk DC, Rudy TE. The West Haven-Yale Multidimensional Pain Inventory (WHYMPI). Pain 1985;23:345-56. [2]Heinemann AW, Lai JS, et al. Measuring participation enfranchisement. Arch Phys Med Rehabil. 2011 Apr;92(4):564:71.

Family: [3]Spanier GB. The measurement of marital quality. J Sex Marital Ther

Work: [4]Reilly MC, Zbrozek AS, Dukes EM. The validity and reproducibility of a work productivity and activity impairment instrument. PharmacoEconomics 1993; 4(5):353-65.

Do we need to assess everything?

What Should be Measured to Understand Pain Conditions?

- What domains are relevant?
- Domain relevance depends upon the purpose of assessment
  - Diagnosis
  - Phenotyping
  - Disease monitoring
  - Outcomes assessment for clinical trials
  - Treatment Planning

Self-Management is Supported by CBT, Fitness, and Education

Topics in Psychosocial Pain Interventions

Exercise/Energy, Reframing/Relaxation, Affect/Action, Sleep/Social, Education (ERASE)

E

R

A

S

E

Exercise and Energy

- Multiple reviews and meta-analyses, and professional society guidelines recommend exercise and physical activity for the treatment of chronic pain and fatigue

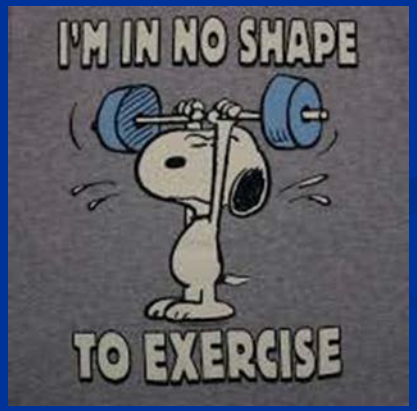
Hassett & Williams. Best Pract Res Clin Rheumatol 2011;25:299-309

“Many studies show that exercise will help your pain and fatigue. I want you to start exercising.”

OK!!

More common responses

Silence



The are “you insane” stare

Resistance

Exercise needs to start with a patient-centric conversation

- Merits
- Barriers
- Motivation
- Rewards
- How to get started

Merits


20
Exercise Benefits
1. Reduces body fat
2. Increases lifespan
3. Oxygenates body
4. Strengthens muscles
5. Manages chronic pain
6. Wards off viruses
7. Reduces diabetes risk
8. Strengthens heart
9. Clears arteries
10. Boosts mood
11. Maintains mobility
12. Improves memory
13. Improves coordination
14. Strengthens bones
15. Improves complexion
16. Detoxifies body
17. Decreases stress
18. Boosts immune system
19. Lowers blood pressure
20. Reduces cancer risk
www.facebook.com/montereybayholistic


THE BRAIN BENEFITS OF EXERCISE
INCREASES PRODUCTION OF NEUROCHEMICALS THAT PROMOTE BRAIN CELL REPAIR
IMPROVES MEMORY
LENGTHENS ATTENTION SPAN
BOOSTS DECISION-MAKING SKILLS
PROMPTS GROWTH OF NEW NERVE CELLS AND BLOOD VESSELS
IMPROVES MULTI-TASKING AND PLANNING
Men'sHealth

Barriers

I'm too fatigued to exercise

Skinny people will laugh at me.

I'm too busy to exercise

I can't afford a gym membership

It's not fun

I hate sweat.

I'm in too much pain to exercise

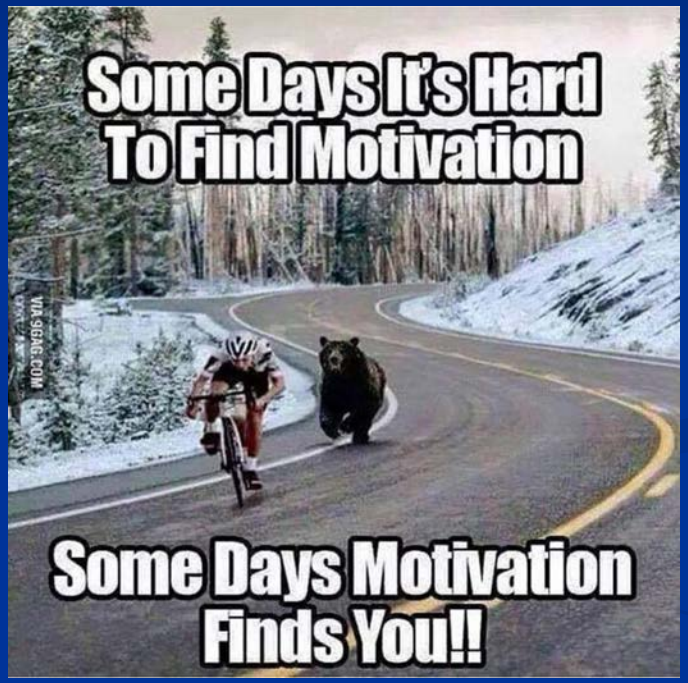
I don't live where I can exercise

I don't have any workout clothes

I have kids to drive around

No one will exercise with me.

Problem Solving, Motivation, and Rewards



Types of Physical Activity

- Aerobic training
  - at moderate intensity can improve pain, fatigue, depressed mood and physical limitations
- Strength training
  - may decrease pain, and depression, and improve overall well-being
- Movement therapies
  - Tai Chi – improves balance, well-being, fitness and pain
  - Yoga – improves pain functioning, HRQOL

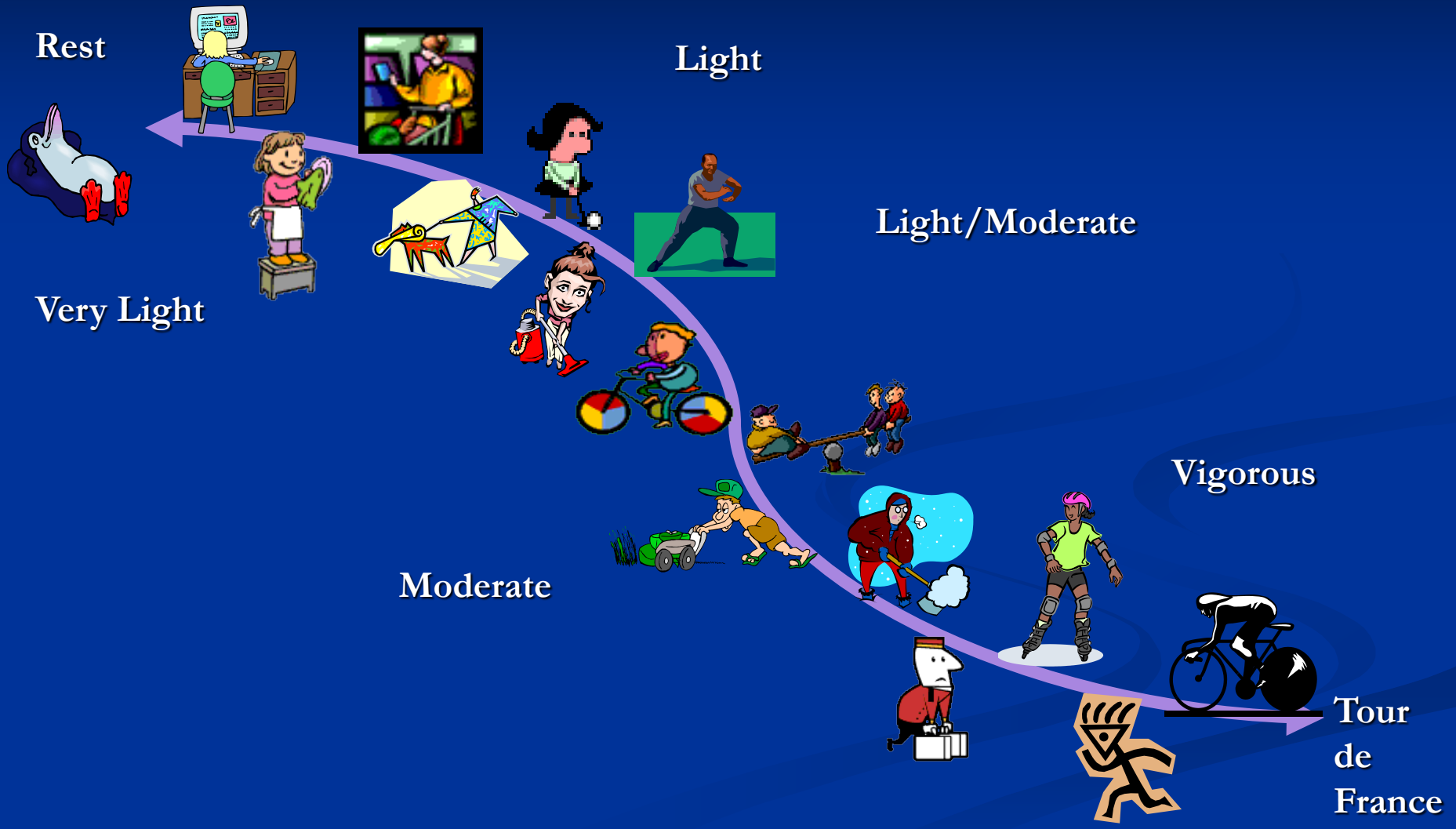
Hassett & Williams. Best Pract Res Clin Rheumatol 2011;25:299-309.; Hauser et al. Arthritis Res Ther 2010;12:R79.; Jones et al. Rheum Dis Clin North Am 2009;35:373-91.; Arnold. Psychiatr Clin North Am. 2010;33:375-408. Peng. Reg Anes Pain Med 2012;37:372-82; Wang et al. N Engl J Med 2010;363:743-54; Haaz & Bartlett. Rheum Dis Clin North Am. 2011:37:33-46.; Langhorst et al. Rheumatol Int 2012 Epub. Ward et al. Musculoskeletal Care 2013;11:203-17.

Step Counts

- Activity trackers – Fitbit ($100) and pedometers can be found for as little as $10.
- Every day beat the day before by 50 steps.
- Healthy: 10,000 steps a day
  - (18 – 1,900 steps in a mile)

Lifestyle Physical Activity

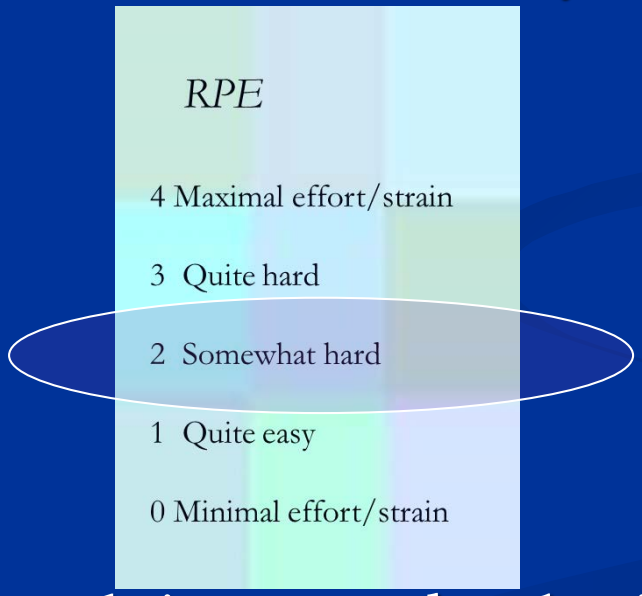
Aerobic Lifestyle Fitness



Hassett, A & Williams DA. (2011). Best Practice & Res Clin Rheum, 25:299-309.

How should I do it?

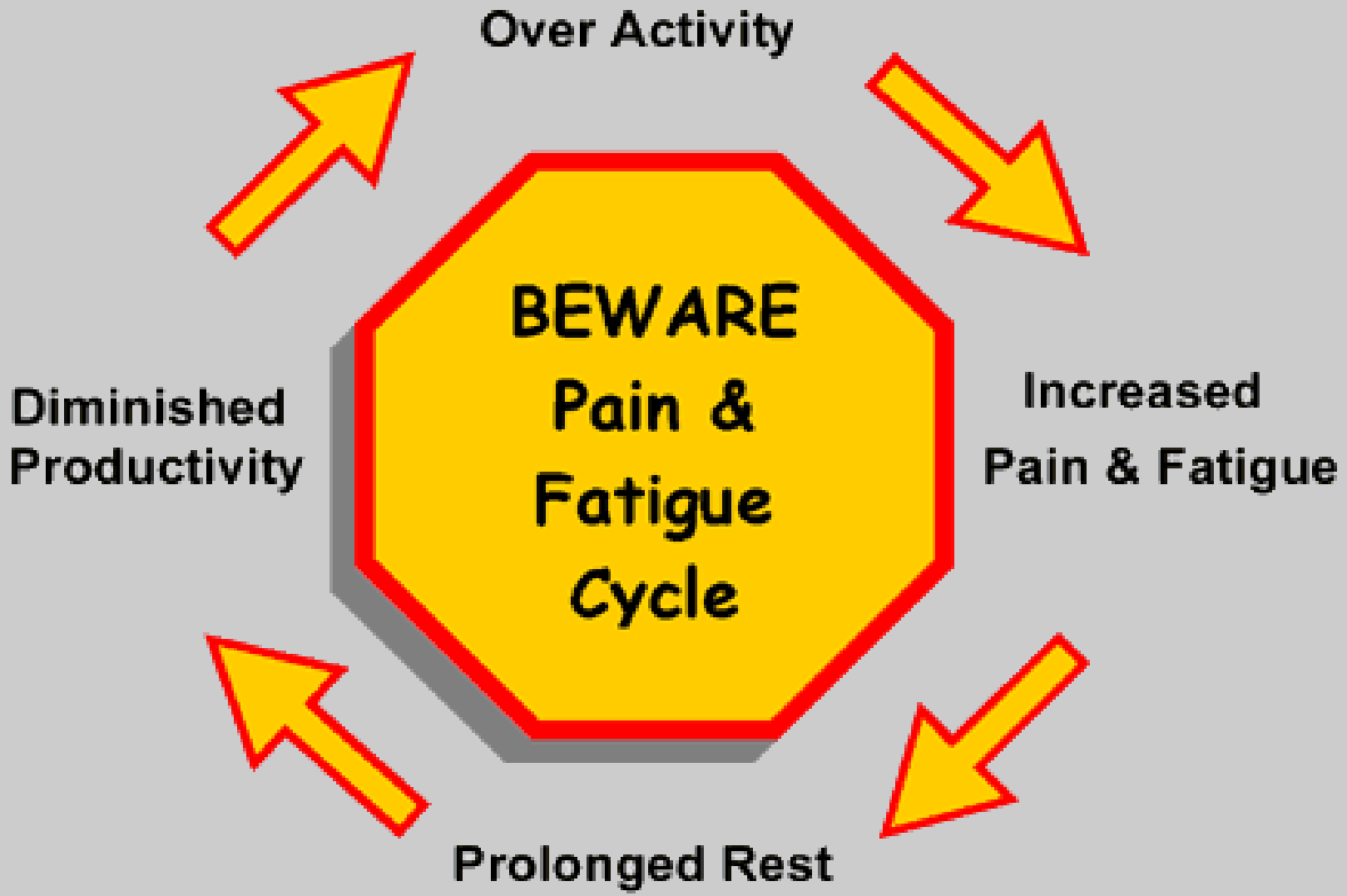
- Follow the F.I.T.T. principle:
  - *F*requency – Number of days per week. (e.g., 3x per wk)
  - *I*ntensity – How hard the activity feels to you.



  - *T*ime – The total time you do physical activity. (e.g. 30min)
  - *T*ype – The kind of physical activity you do.

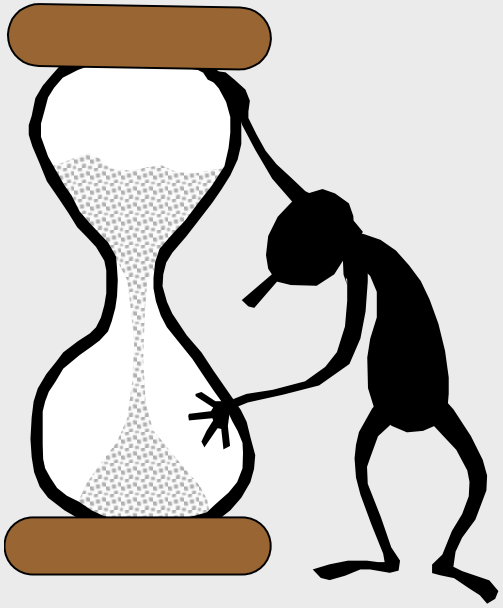
ERASE

Energy Efficiency


Over Activity
Increased Pain & Fatigue
Prolonged Rest
Diminished Productivity
BEWARE Pain & Fatigue Cycle

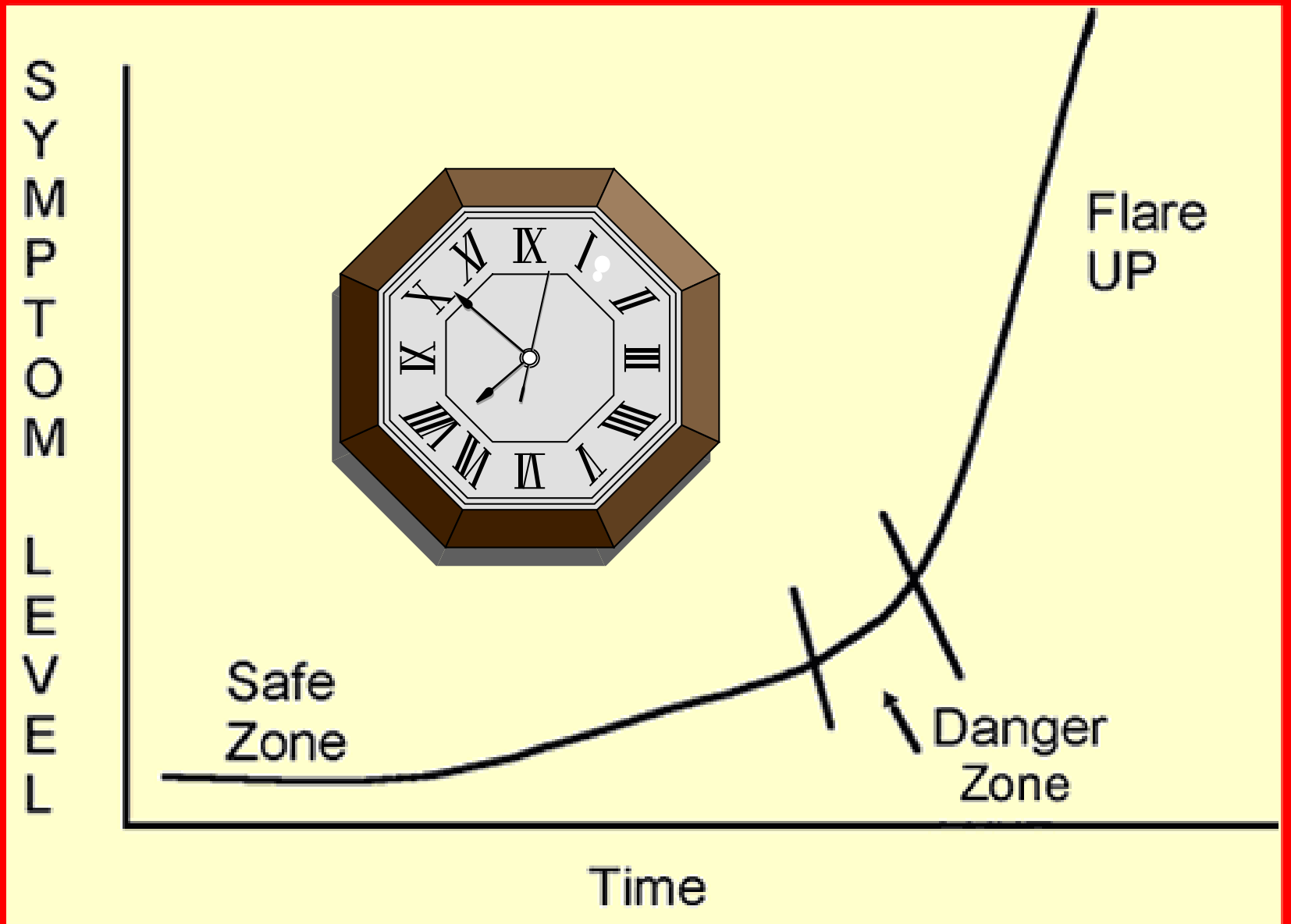
Behavioral Activation Skills

Time-Based Pacing



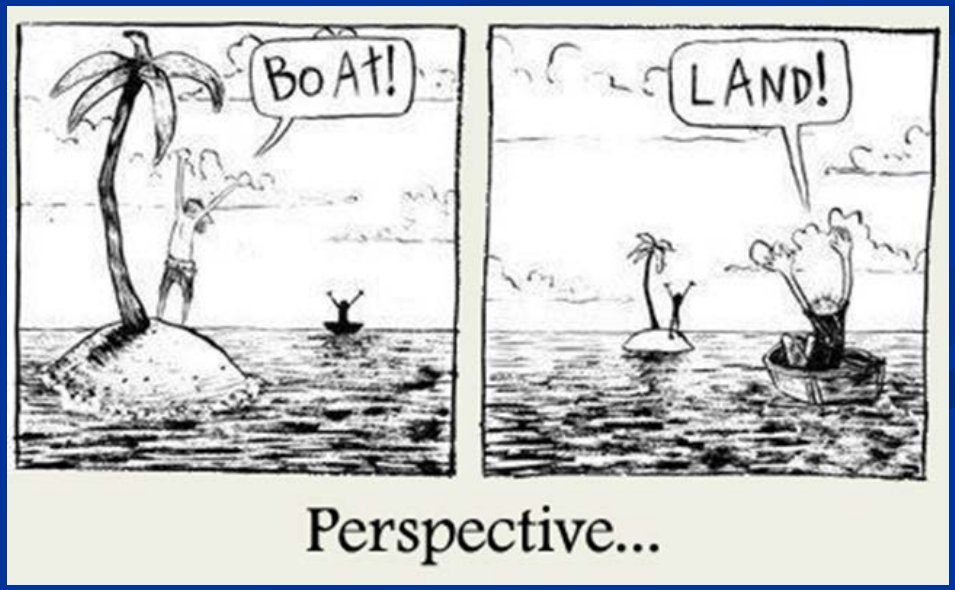
Activity-Rest-Activity-Rest

Gil et al. In Chronic Pain (France et al. Eds). 1988. American Psychiatric Press


SYMPTOM LEVEL
Flare UP
Safe Zone
Danger Zone
Time

ERASE

Reframing



Novel learning

Novel skills

Novel acquaintances

New activities

- **Time to figure out each step**
- **Unknown outcomes**
- **Fatiguing**
- **Awkward**
- **No easy flow**

Automatic Thinking

Familiar Activity

- Flows easily
- Mindless
- Efficient
- Multi-task
- Lower stress

But…Can close off need for novelty, and creativity

- Closed minded

If Novel Learning is Negative, Automatic Thinking becomes Negative

Acute pain is awful

- Feels better with rest, avoiding tasks, withdraw socially
- Prepares self for the worst
- Catastrophizing – produces negative emotions

When pain becomes chronic

- Tendency to retain acute pain thinking
- Don't revisit assumptions about pain
- Physiological toll - deconditioning
- Need to focus on challenging old assumptions

STEP 1	STEP 2	STEP 3	STEP 4
Identify the situation that causes negative thoughts	**Describe your negative thoughts**	**Describe your emotions**	**Reframe your thoughts**
I haven't done the laundry in weeks. It just hurts too much.	• I'm a terrible wife • I can't do anything anymore • My husband will be angry with me	• Guilt • Worthlessness • Anxiety	• Having fibromyalgia is not my fault, and it does not mean I am a bad wife • There are many things I can do without help, but laundry is not one of them • If I explain to my husband about my pain and ask for his help, he'll understand

ERASE

Mindfulness Meditation

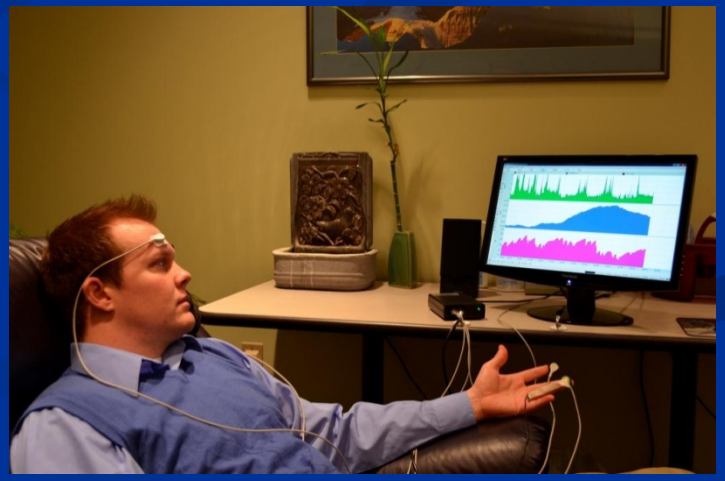
- State of consciousness where the focus in on attention, awareness and moment-by-moment experience
- Attitude of curiosity, openness, and acceptance
- Decreased automatic thinking, and analytical self-referential rumination

Marchand. J Psychiatr Pract 2012;18:233-52. Wetherell et al. Pain 2011;15(9):2098-107: Reiner et al. Pain Med 2013;14:230-42

Methods of Achieving the Relaxation Response

Visual Imagery

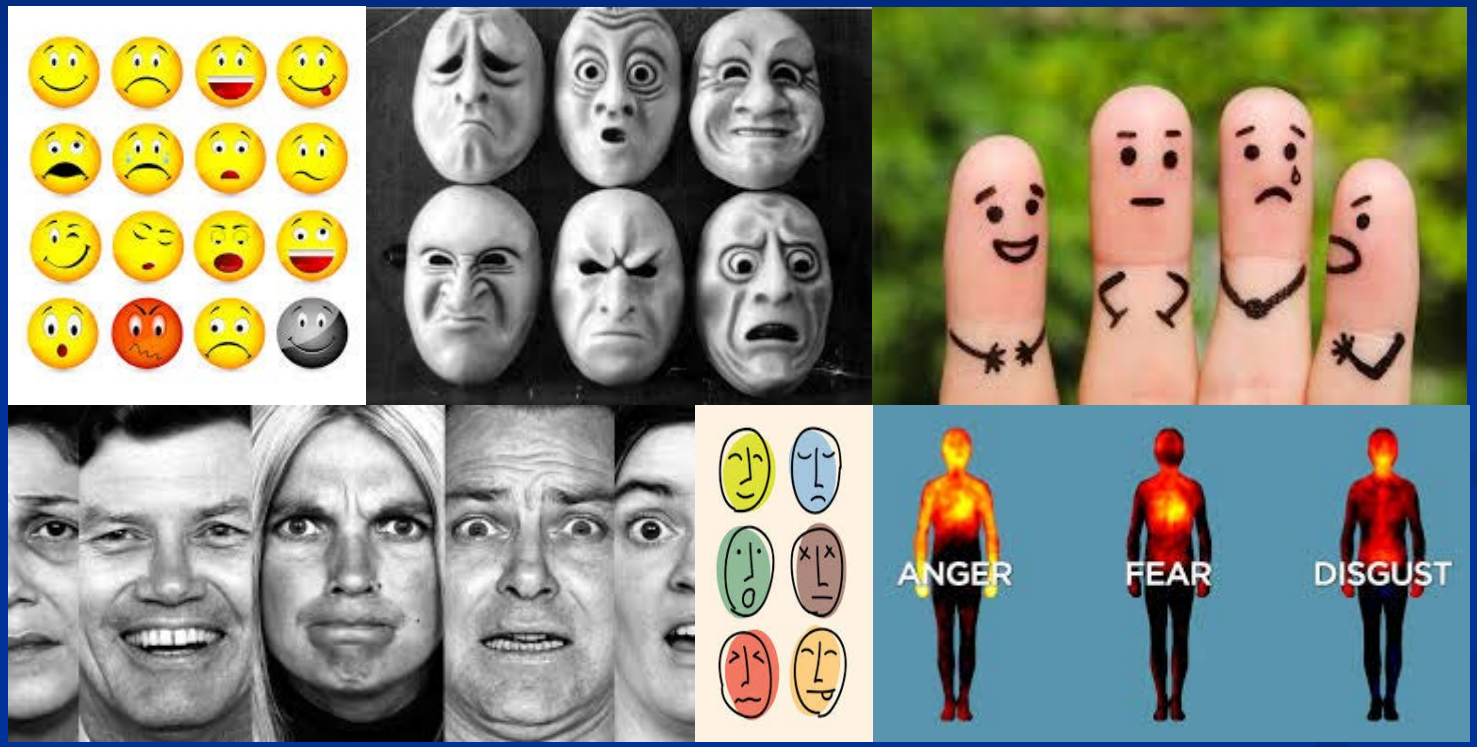
Meditation



Biofeedback

ERASE

AFFECT



Emotional Awareness and Expression Therapy (EAET)

- Based on assumption that pain is influenced by unresolved emotional conflict/trauma
- Therapy seeks to resolve affective perturbation
- Effects similar to CBT with some profound remissions of pain
- May be good fit for individuals with trauma history

Lumley, Schubiner, Lockhart, Kidwell, Harte, Clauw, & Williams (2017). Pain.

Pleasant Activity Scheduling

Pleasant Activity Scheduling

- Initiates movement through pleasant events
- Pleasant affect buffers pain
- Scheduling is better than random occurrences
  - More likely to happen
  - More predictable, less flare-ups

ERASE

ACTION

The Problem Solving Cycle Worksheet

Step 1
Identify the Problem

Step 2
Collect Information
What do I know about this problem?
Where can I get more information?

Step 3
Brainstorm Solutions

Step 4
Evaluate Brainstorming Ideas
Consider each idea from Step 3 in terms of its being realistic and favorable

Choose one solution to try:

Step 5
Develop Workable Plan

Plan:

Barriers:

Choices:
Put your plan into action
Barriers too great (go back to Step 3)
Multiple problems (go back to Step 1)

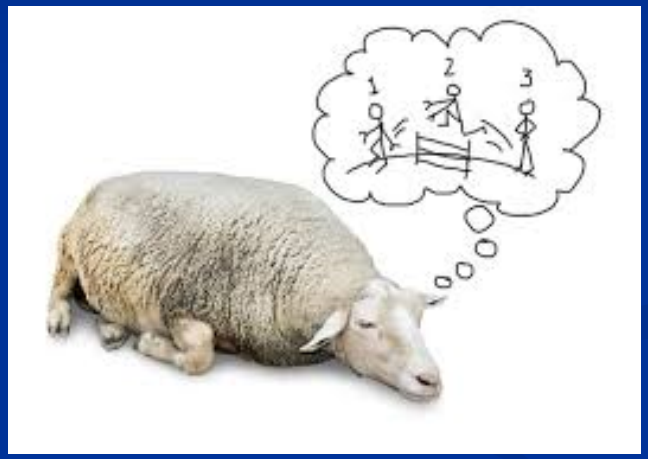
Step 6
Review and Evaluate
What happened?

Goal Setting

Poor Goal: Make a bunch of money
Strategic Goal: Make $50 this week
Tactical Goal: Sell my old suits to consignment store on Thursday

ERASE

Sleep



One night's loss of sleep…

- Impacts the next 2 days
  - Physical ability
    - Coordination
    - Dexterity
    - Energy
  - Mental ability
    - Emotional stability
    - Memory
    - Concentration

Affleck, G et al. Pain. 1996;68:363-368

Sleep Hygiene Skills

Timing
Regular bed time/wake time

Sleep Behavior
Get in bed only when sleepy
Use bed for sleep
Get up after 15' if no sleep

Thermal Tips
Decline in core temp signals sleep
Exercise, warm bath before bed

Environment
Steady room temperature
Keep room dark

Ingestion
Decrease nicotine
Decrease Caffeine
Alcohol interferes with sleep
Light snack is recommended

Mental Control
Effort will not produce sleep
Avoid mental stimulation
Seek mental quiescence

Edinger, JD et al. *Arch Intern Med.* 2005;161(21):2527-2535
Morin, CM et al. Am J Psychiatry. 1994;151:1172-1180.

ERASE

Social

Social Challenges

Dr. -Patient

Awkward
Tense
Confrontational

Friends

Caring at first
Withdrawal
Dependent
Loss

Family

Withdrawal
Impatience
Shifting roles
Dependence
Loss
Loss of Self-esteem

Employer and co-workers

Others cover
Competence?
Accommodate?
Loss of role
Lost Self-esteem
Lost Motivation
Lost social position

ERASE

Education

Educational Resources

CHRONIC PAIN Research Alliance

American Chronic Pain Association

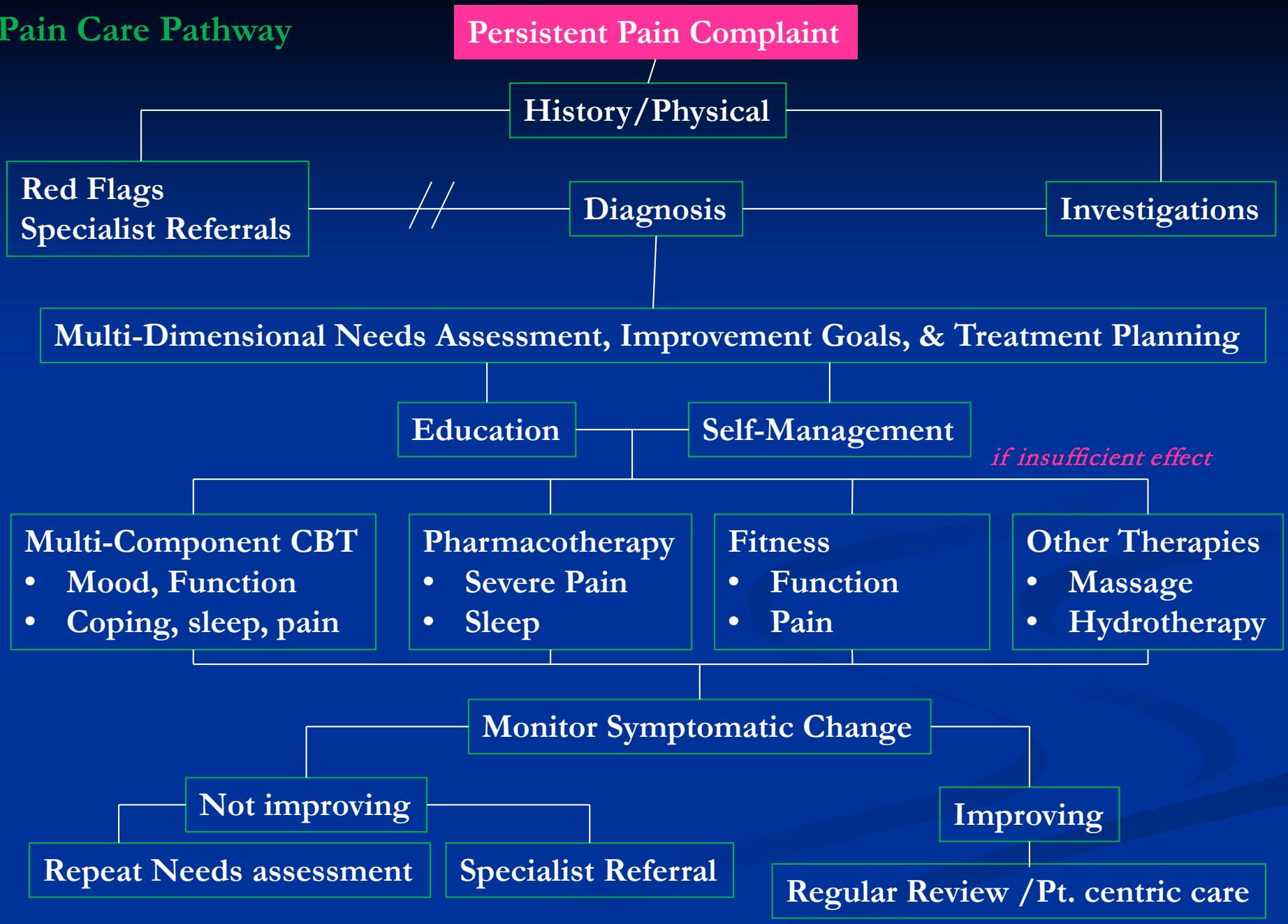
- Self-help books on Chronic Pain
  - -Amazon lists 100 (1/2018)
- Subscription magazines
- Patient organizations

International Association for the Study of Pain
IASP
Working together for pain relief

NFA
National Fibromyalgia Association

American Pain Society
RESEARCH
EDUCATION
TREATMENT
ADVOCACY

Pain Care Pathway



Adapted from Macfarlane et al. Ann Rheum Dis, 2017;76:318-328; Lee, et al., BJA 2014; 112:16-24; Peterson et al, VA ESP Project #09-199, 2017