

Why not all back pain patients are the same ...and what you can do about it

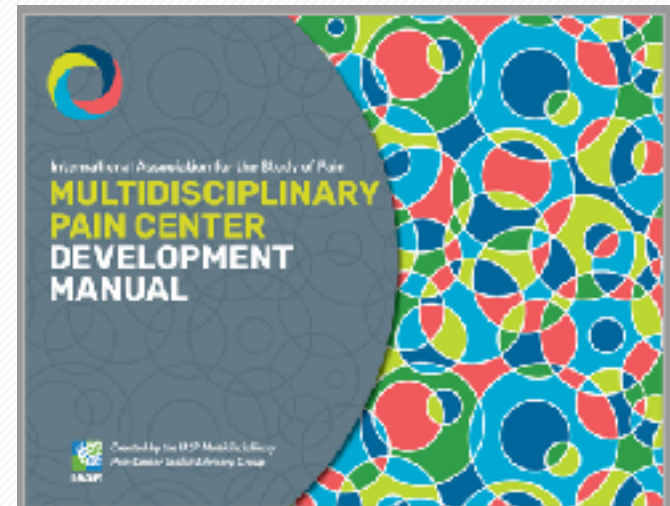
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Conflicts and Acknowledgements

- No Conflicts of Interest for this talk
- Slides prepared by Dr Lee Ji Kwan, and adapted from Essential Pain Management educational program and IASP Multidisciplinary Pain Toolkit



www.essentialpainmanagement



www.iasp-pain.org

2021

IASP Global Year about Back Pain



www.iasp-pain.org/GlobalYear

Factsheets on Pain Prevention

Global Year Fact Sheets, prepared by top experts on various aspects of back pain, will be available soon. Please check back for updates. The topics listed below may not reflect the final list of fact sheets.

If you have any questions, please email globalyear@iasp-pain.org.

The Global Burden of Low Back Pain

Neurobiological Mechanisms Contributing to Back Pain

Environmental Contributors to Back Pain

Neck Pain

Approach to Activity, Biomechanical Loads and Flare-ups of Back Pain

Pathophysiological Assessment of Back Pain

Low Back Pain in Childhood and Adolescence

Back Pain in the Workplace

Exercise and Back Pain

Disparities in Back Pain

Education and Back Pain

Cost-effective treatments for Back Pain

Self-Management of Back Pain

PAIN COMPLAINTS IN PRIMARY CARE SETTINGS – Results from the National Medical Care Survey Malaysia

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³Psychological Med, University Putra Malaysia, Selangor, Malaysia

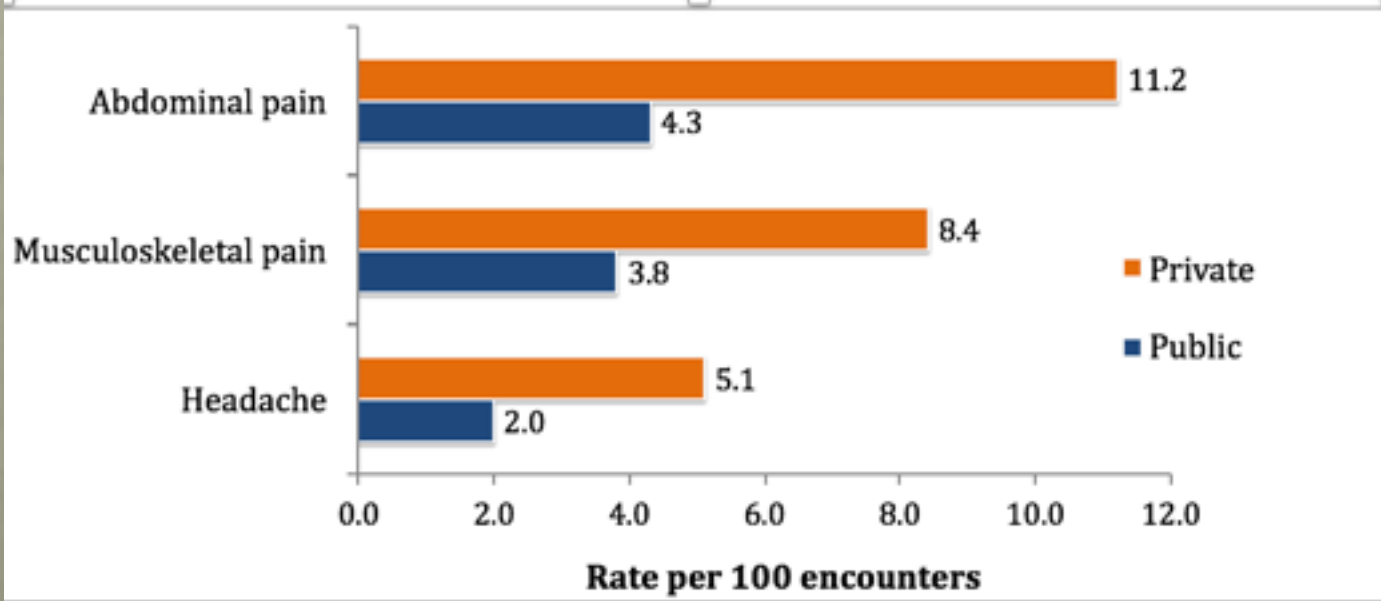


Rate or pain complaints per 100 patient encounters = 27.6
(13.3 public, 33.5 private)

Figure 3: Top three pain-related complaints

Key message:

Similar categories of pain complaints were observed in public and private clinics, with higher rates in the private sector.



Outline

- Some basic concepts
 - Pain definition
 - Types of Pain
 - Differences between acute and chronic pain
 - The Pain matrix
- Pain as a biopsychosocial experience
 - Limitations of the biomedical model of pain management
- Biopsychosocial model of pain
 - Biopsychosocial conceptualization of suffering
- Application of the model to patients (examples)
- Pain Self Management

What is Pain?

- International Association for the Study of Pain (IASP 2020)
 - Pain is ‘an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage’



What is Pain?

- Pain is always a personal experience, influenced by biological, psychological and social factors. Emotions are important.
- Pain and nociception are different phenomena
- The cause of pain is not always visible
- A person's report of an experience as pain should be respected

‘Pain is what the patient says hurts.’



Phy

Brain:

Thalamus is the second relay station.

Connections to many parts of the brain - cortex, brainstem, limbic system

Pain perception occurs in the brain.

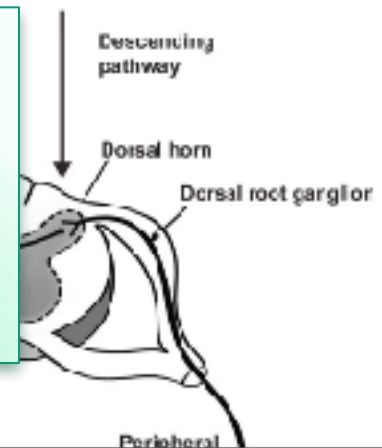


- 4 steps:
 - Periphery
 - Spinal cord
 - Brain
 - Modulation

Modulation:

Descending pathway from brain to dorsal horn.

Usually inhibitory, but can be excitatory.



Periphery:

Tissue injury —>

Release of chemicals—>

Stimulation of pain receptors

(nociceptors: A δ / C fibres) —>

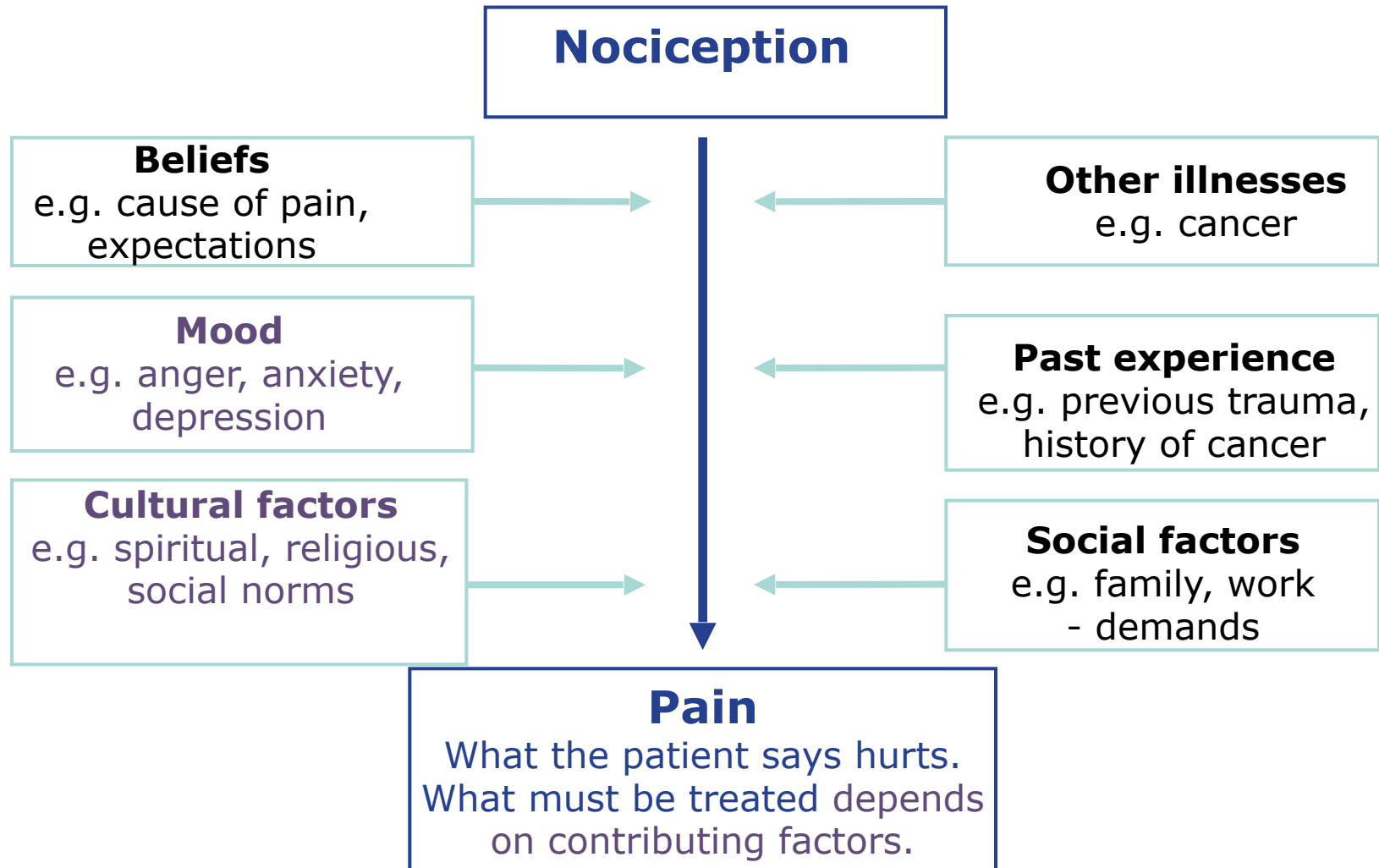
Spinal Cord

Spinal Cord:

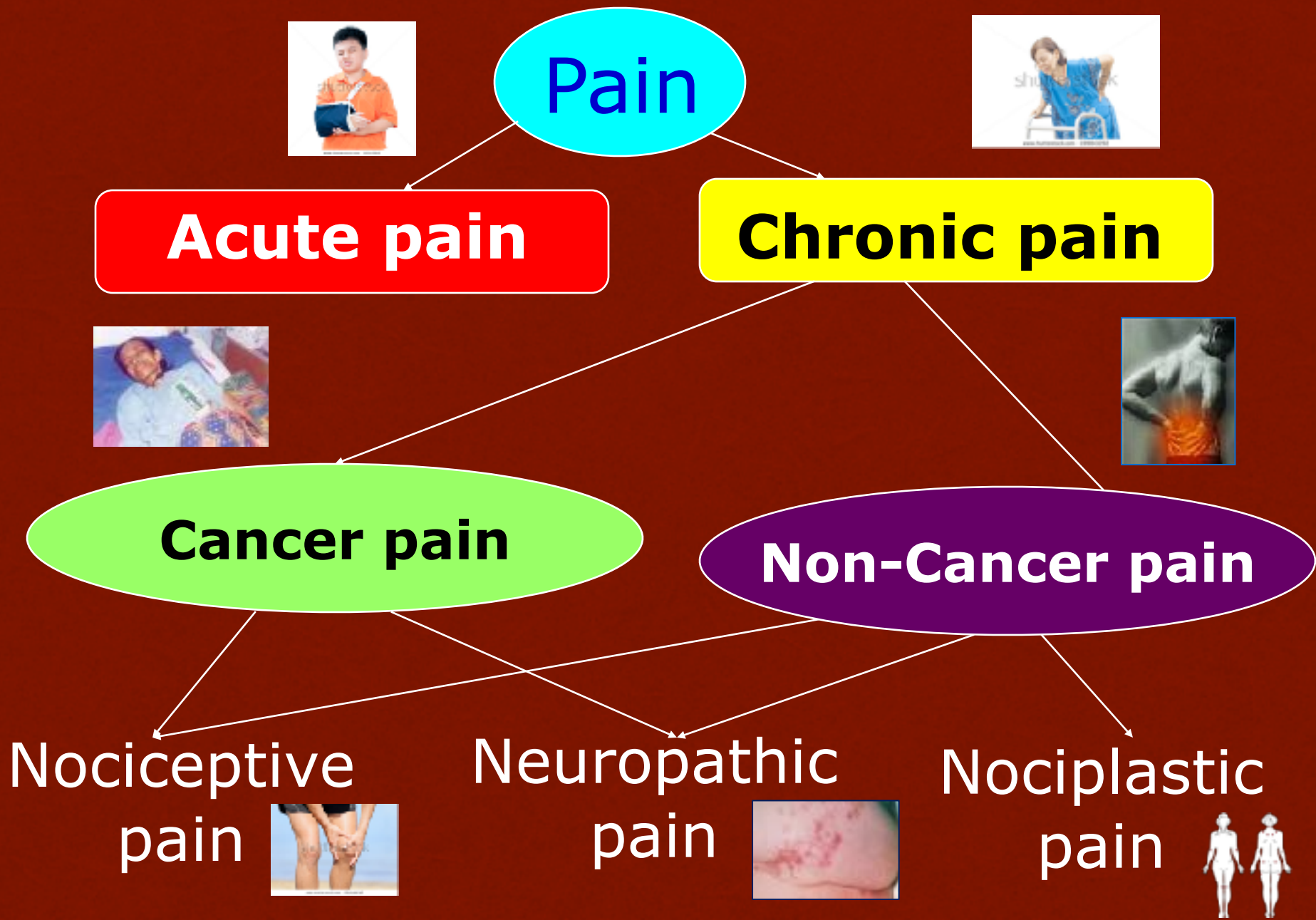
Dorsal horn is the first relay station.

A δ or C neurone synapses with second order neurone. Second order neurone travels up opposite side of spinal cord.

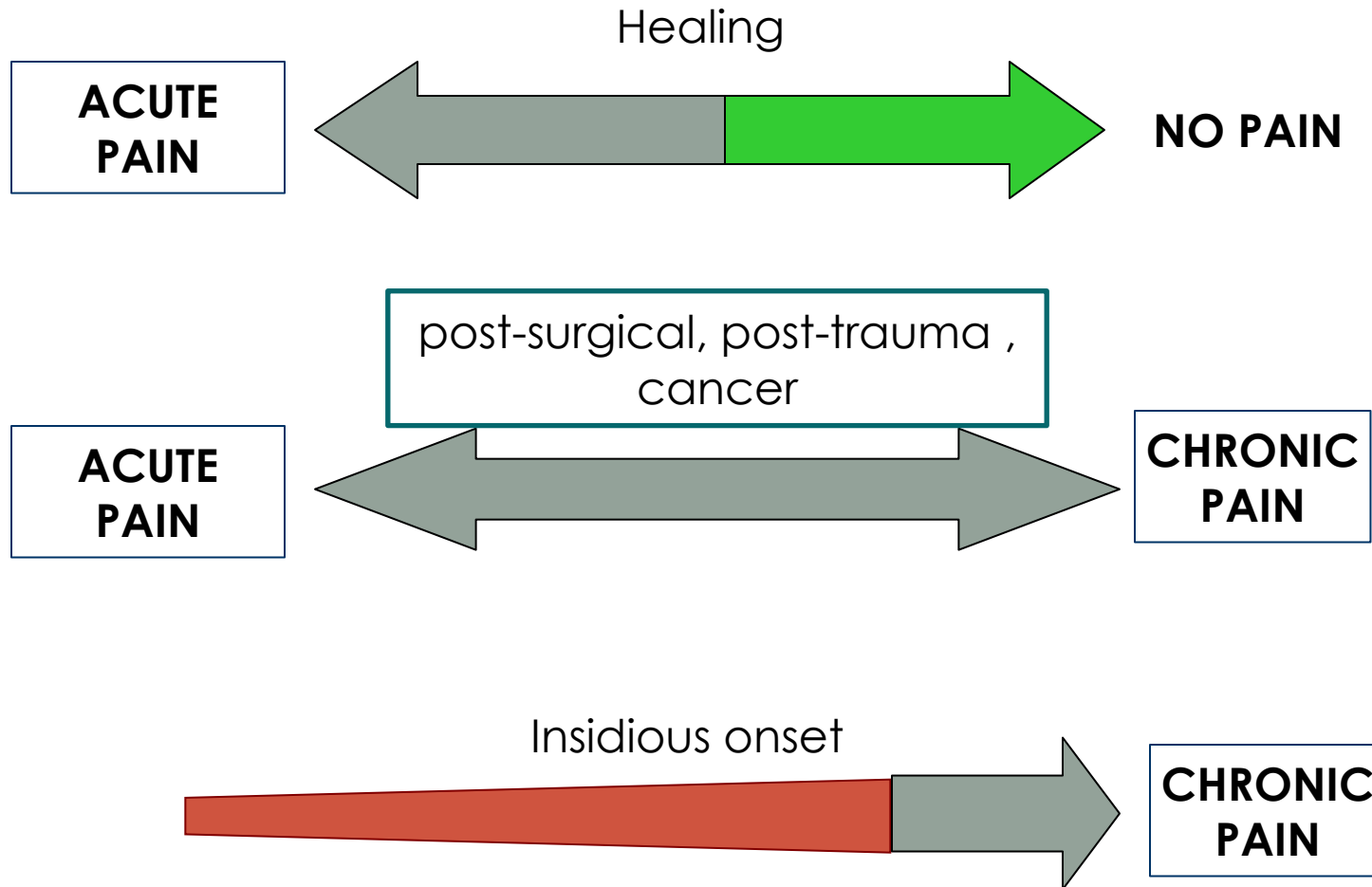
Nociception is not the same as pain!



Types of Pain



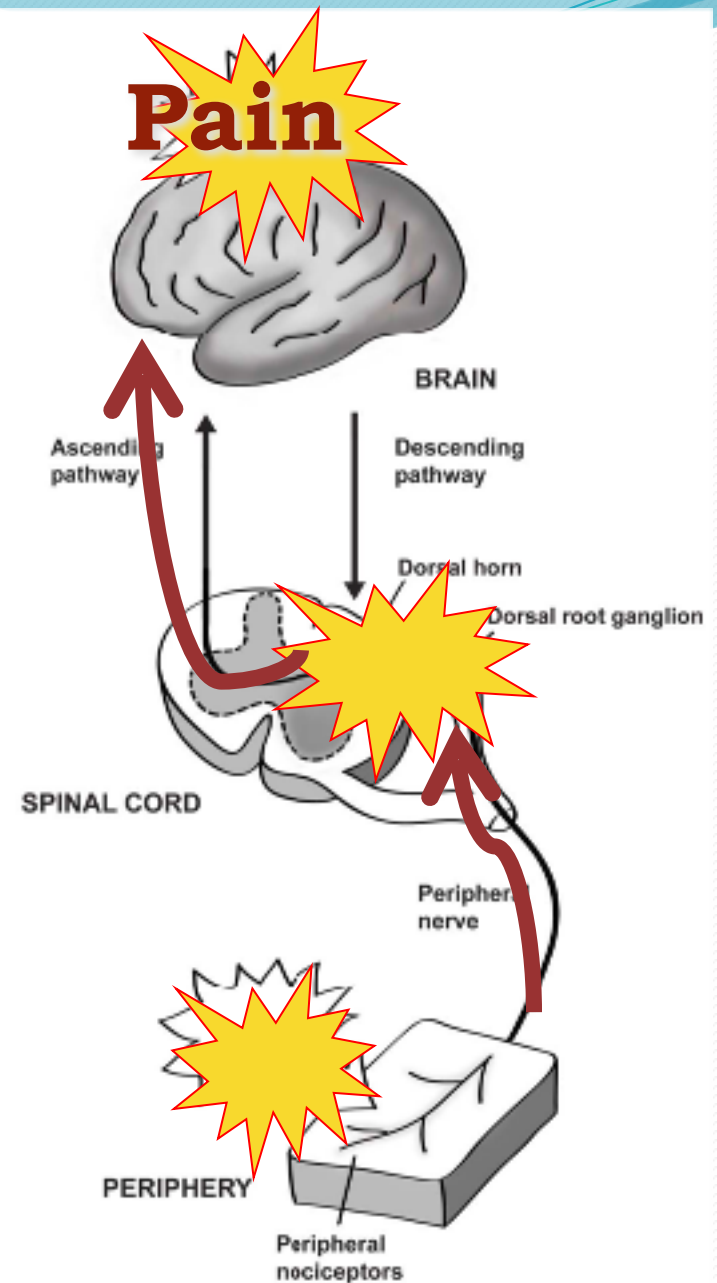
Spectrum of pain



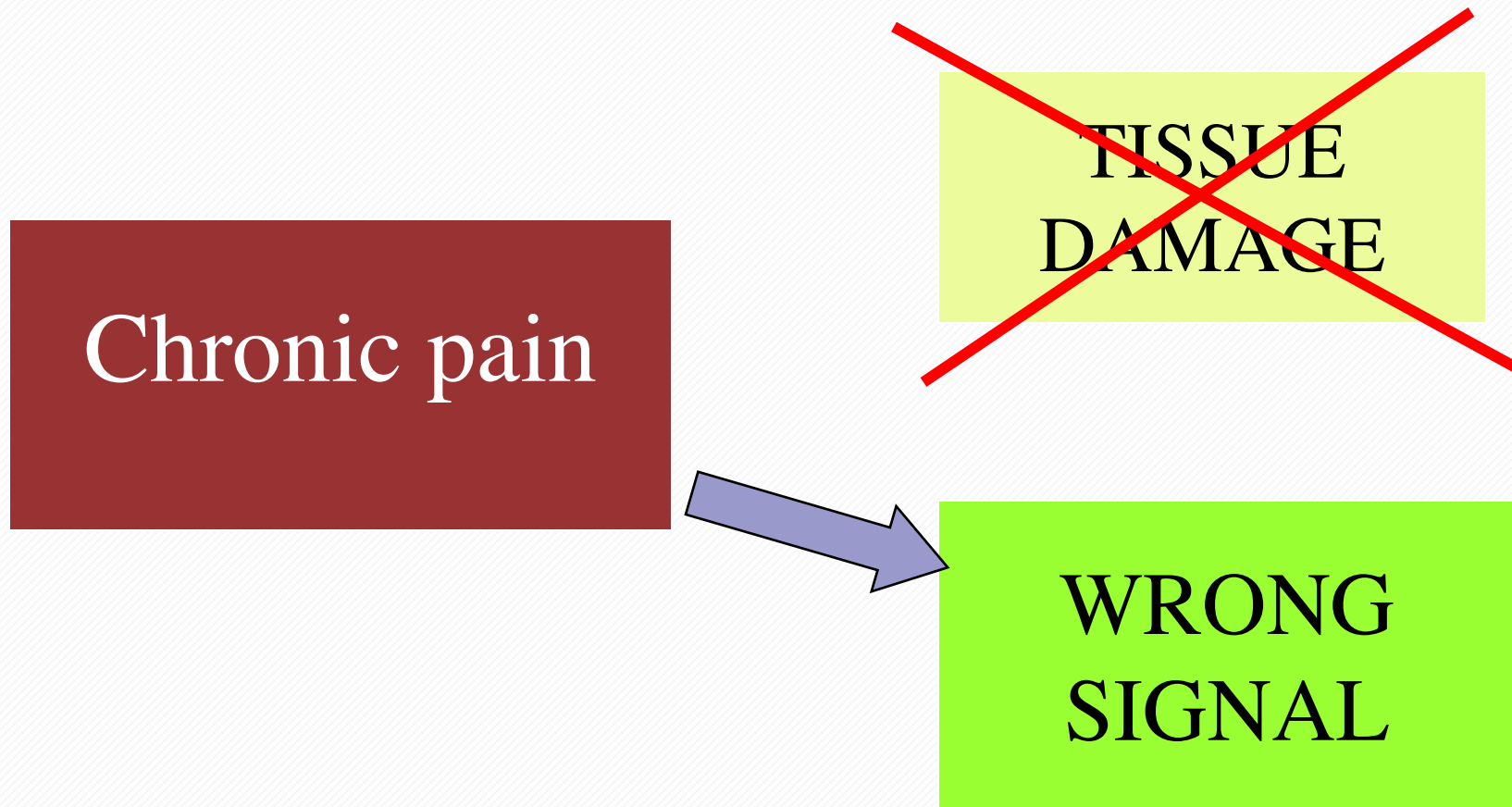
What happens when pain becomes chronic?

“Sensitization”

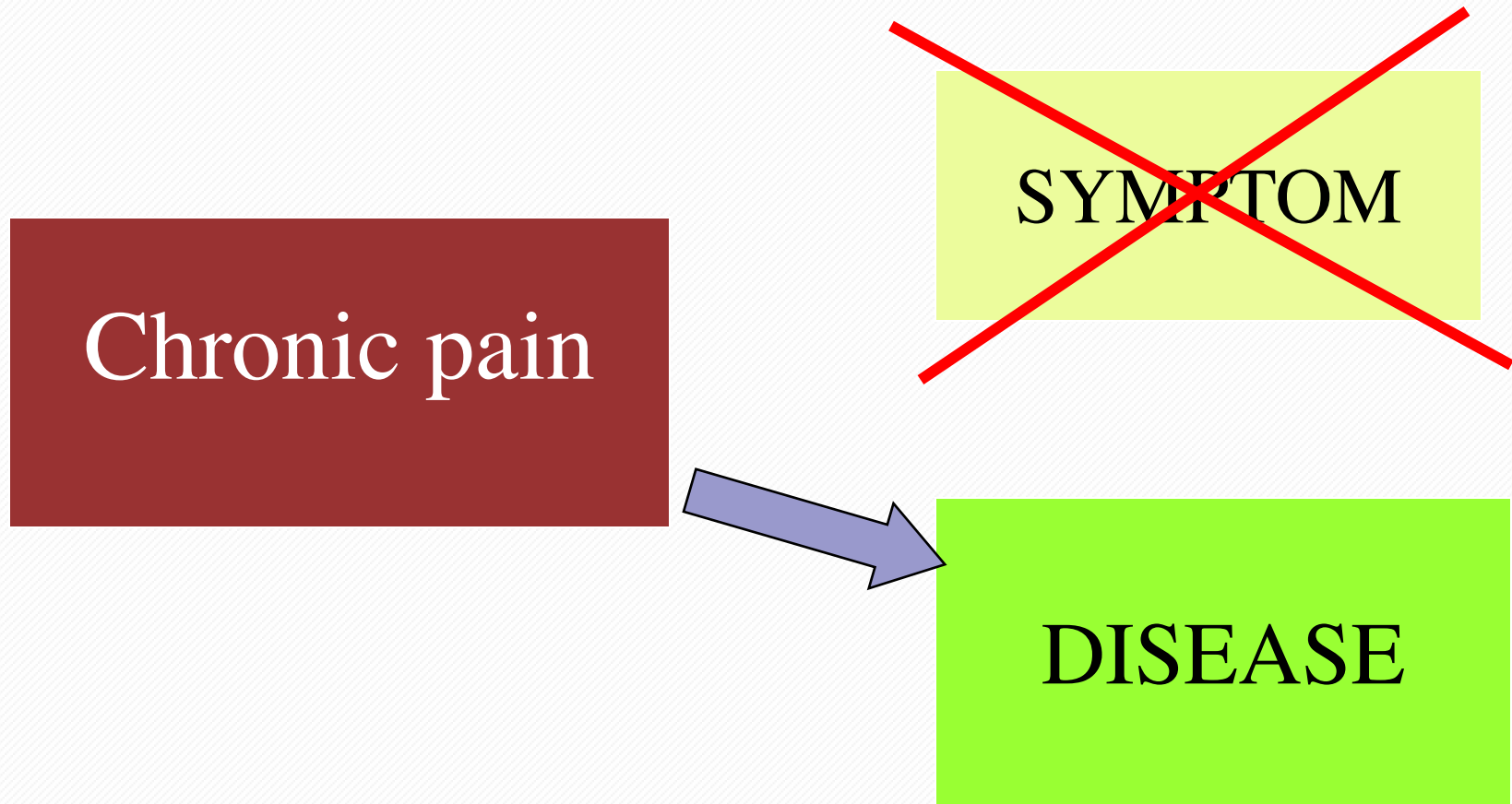
- Peripheral
- central



When pain becomes chronic,
PAIN IS NO LONGER A SIGNAL OF TISSUE DAMAGE



When pain becomes chronic,
PAIN IS NO LONGER A SYMPTOM

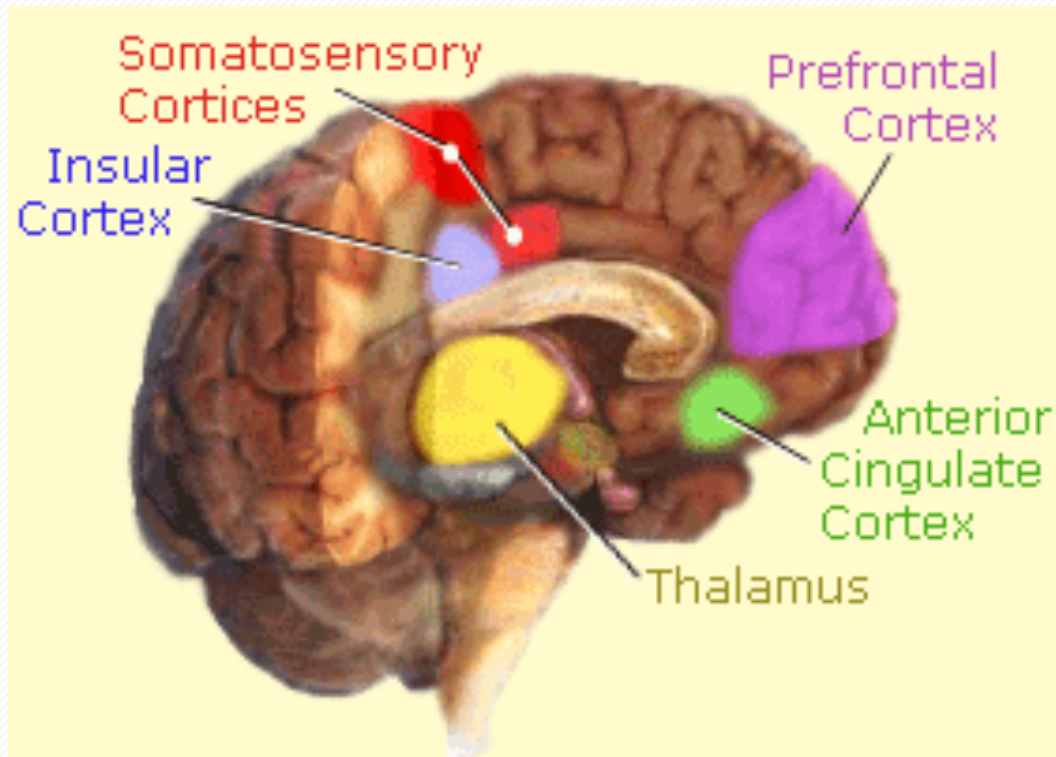


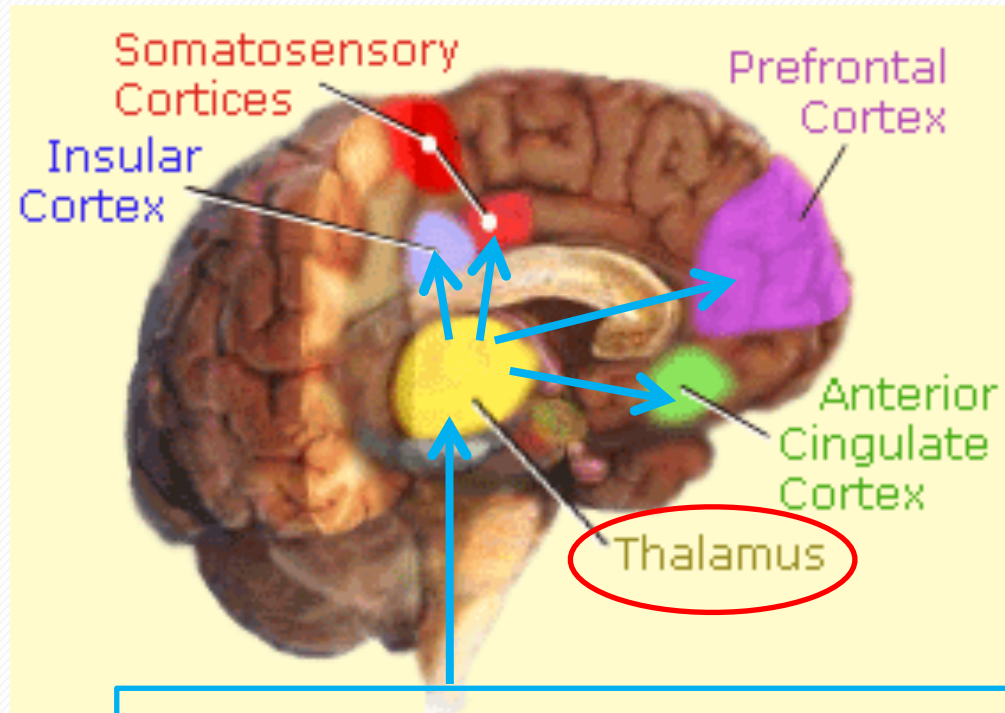
Differences between acute and chronic pain

	Acute pain	Chronic pain
Onset & timing	Sudden, short duration Resolves /disappears when tissue heals	Insidious onset (no definite injury) or Pain persists despite tissue healing
Signal	Warning sign of actual or potential tissue damage	Not a warning signal of damage “False alarm” “Wrong Signal”
Severity	Correlates with amount of damage	Severity not correlated with damage
CNS involvement	CNS intact- acute pain is a symptoms	CNS may be dysfunctional- chronic pain is a disease
Psychological effects	Less Unrelieved pain may → anxiety and sleeplessness (improves when pain is relieved)	Often associate with depression, anger, fear, social withdrawal etc.

Pain Matrix

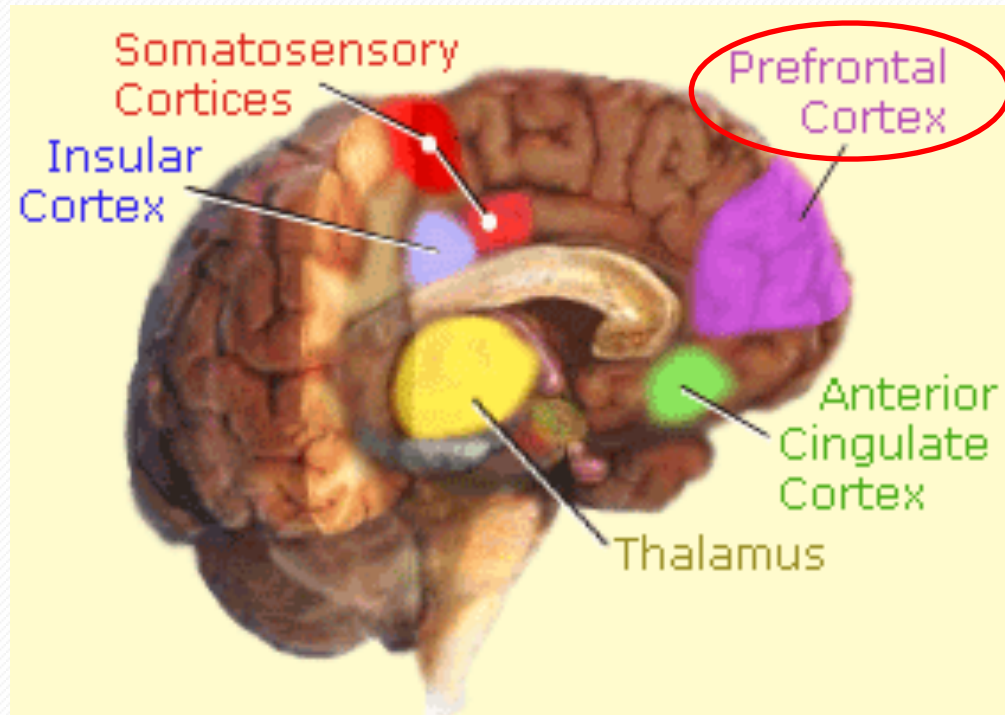
- Brain areas and structures that are involved in pain processing



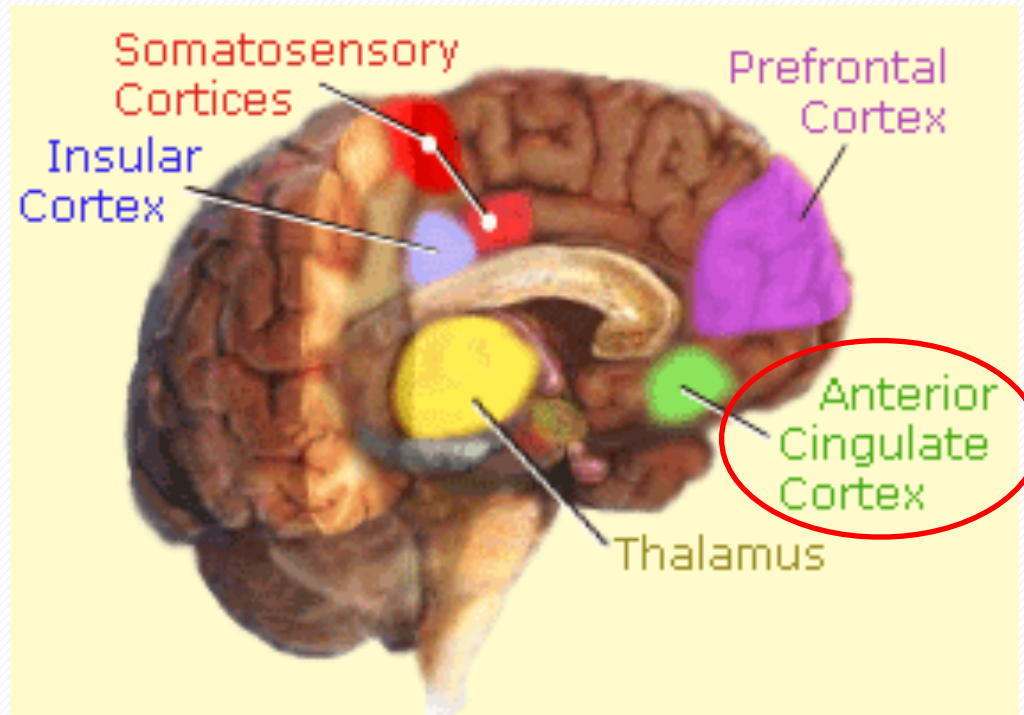


Signals from periphery and spinal cord

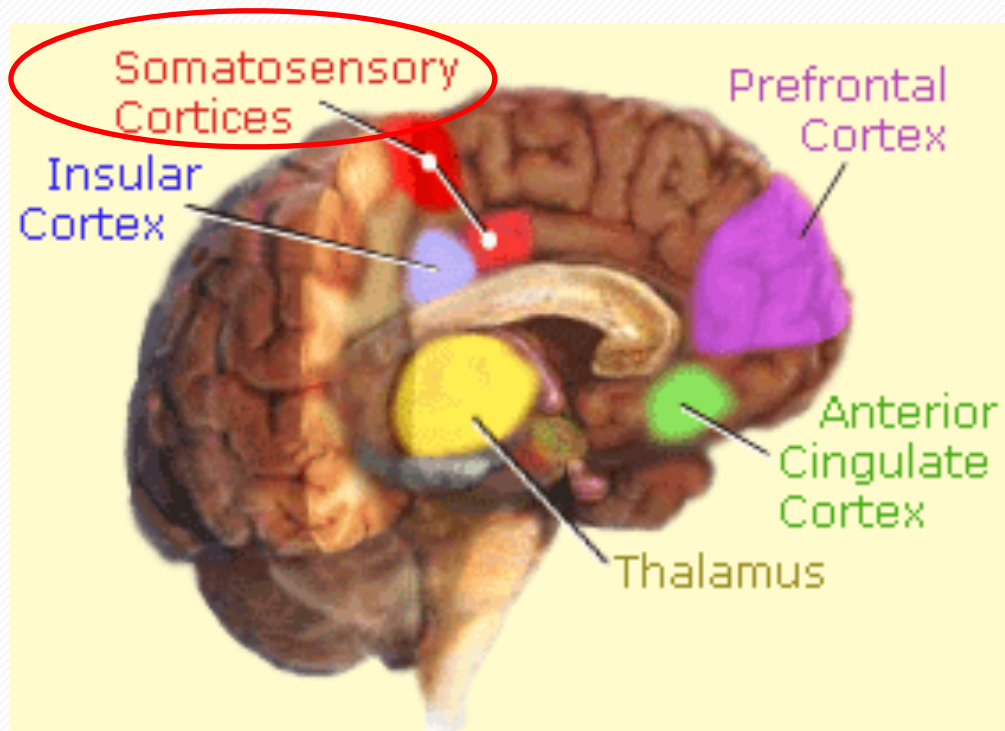
- Thalamus
 - Primary relay center for transmission of sensory signals



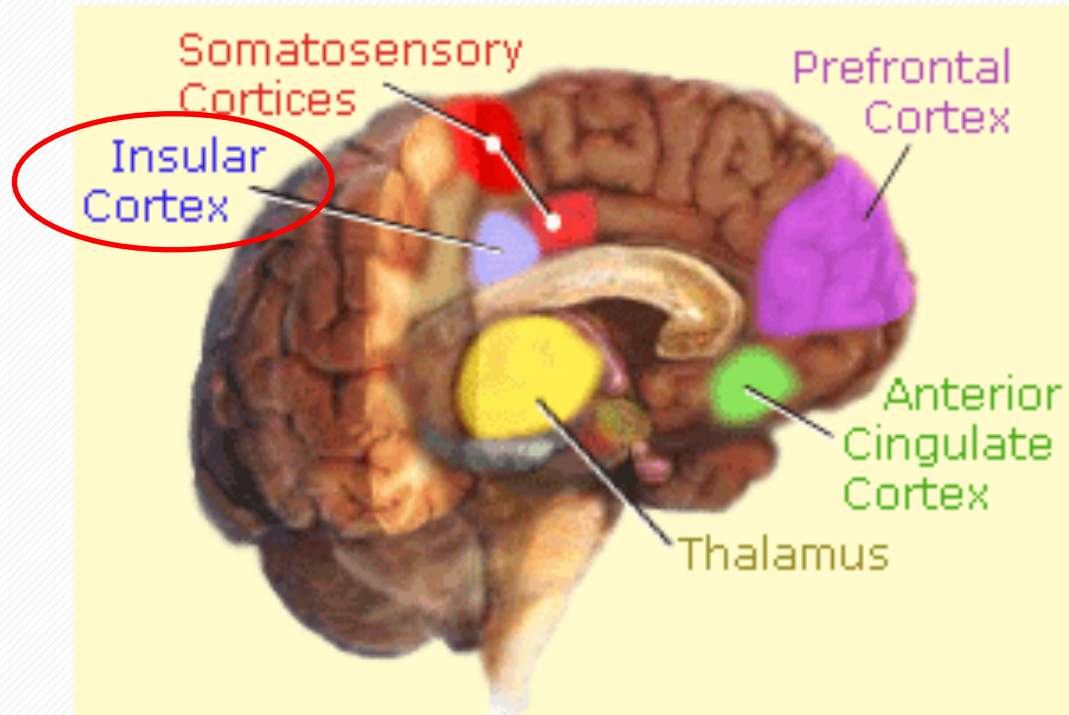
- Prefrontal Cortex
 - Planning, social judgment, executive functioning
 - Cognitive aspects of pain
 - Meaning of pain, what to do about the pain



- Anterior Cingulate Cortex (ACC)
 - Affective/ emotional component
 - (e.g. sense of suffering)
 - Initiation and facilitation of coping behavior

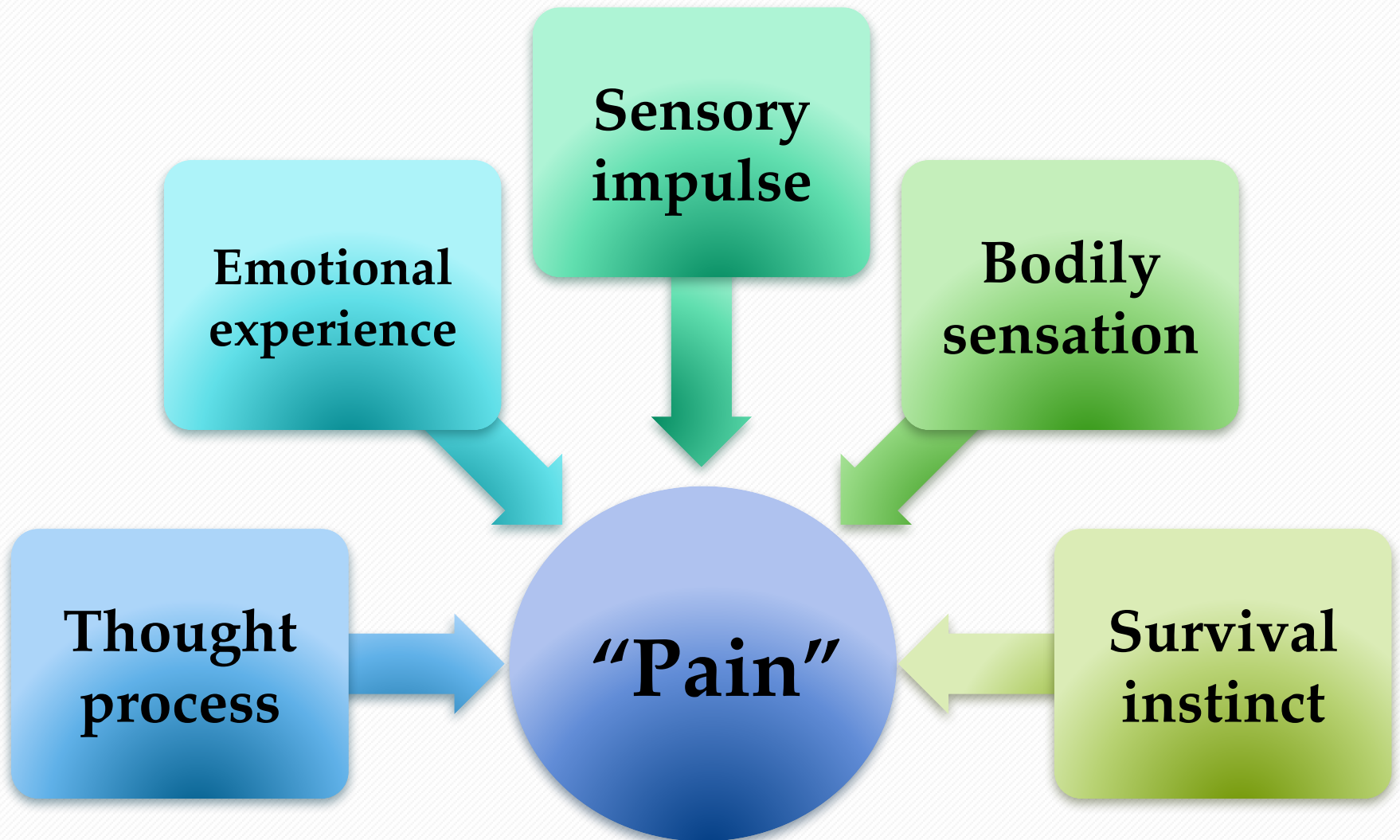


- Somatosensory Cortices
 - Primary (S1): Location of pain
 - Secondary (S2): Severity and quality of pain



- Insula
 - Homeostasis
 - Survival instinct
 - Lack of oxygen, pain, low blood sugar

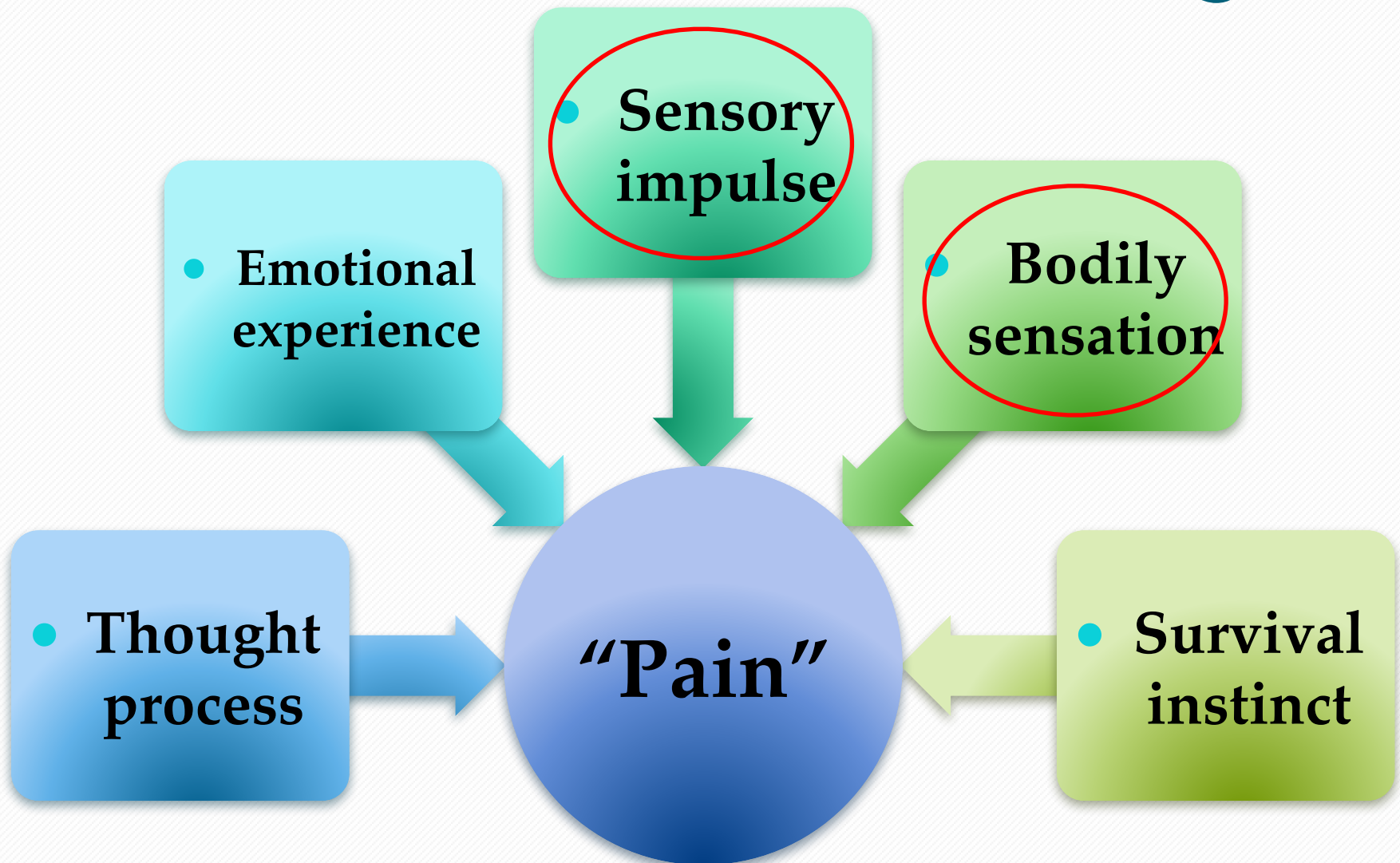
Pain as a Composite Experience



Biomedical Treatment

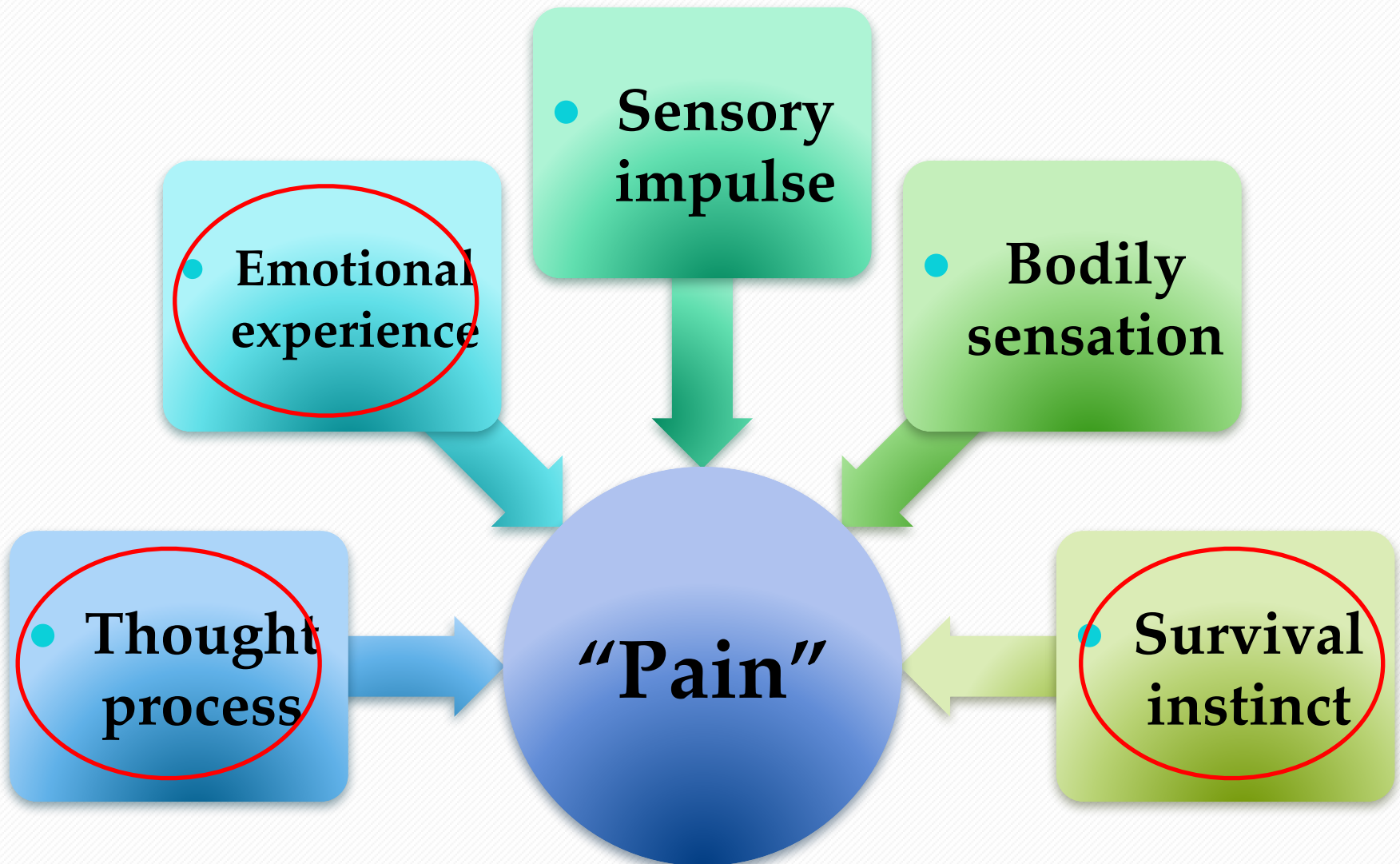


Biomedical treatment targets



??

Psychological approaches



Psychological Treatment

- Cognitive therapy
 - Unhelpful and erroneous pain-related cognition
 - e.g. Catastrophizing
- Behavioral therapy
 - Adaptive behavioral response to pain
 - e.g. Pacing
- Relaxation-based therapy
 - Alter sensory experience
 - e.g. Deep breathing

Suffering in Chronic Pain

Biomedical Treatments

Chronic Pain

How does chronic pain lead to suffering?

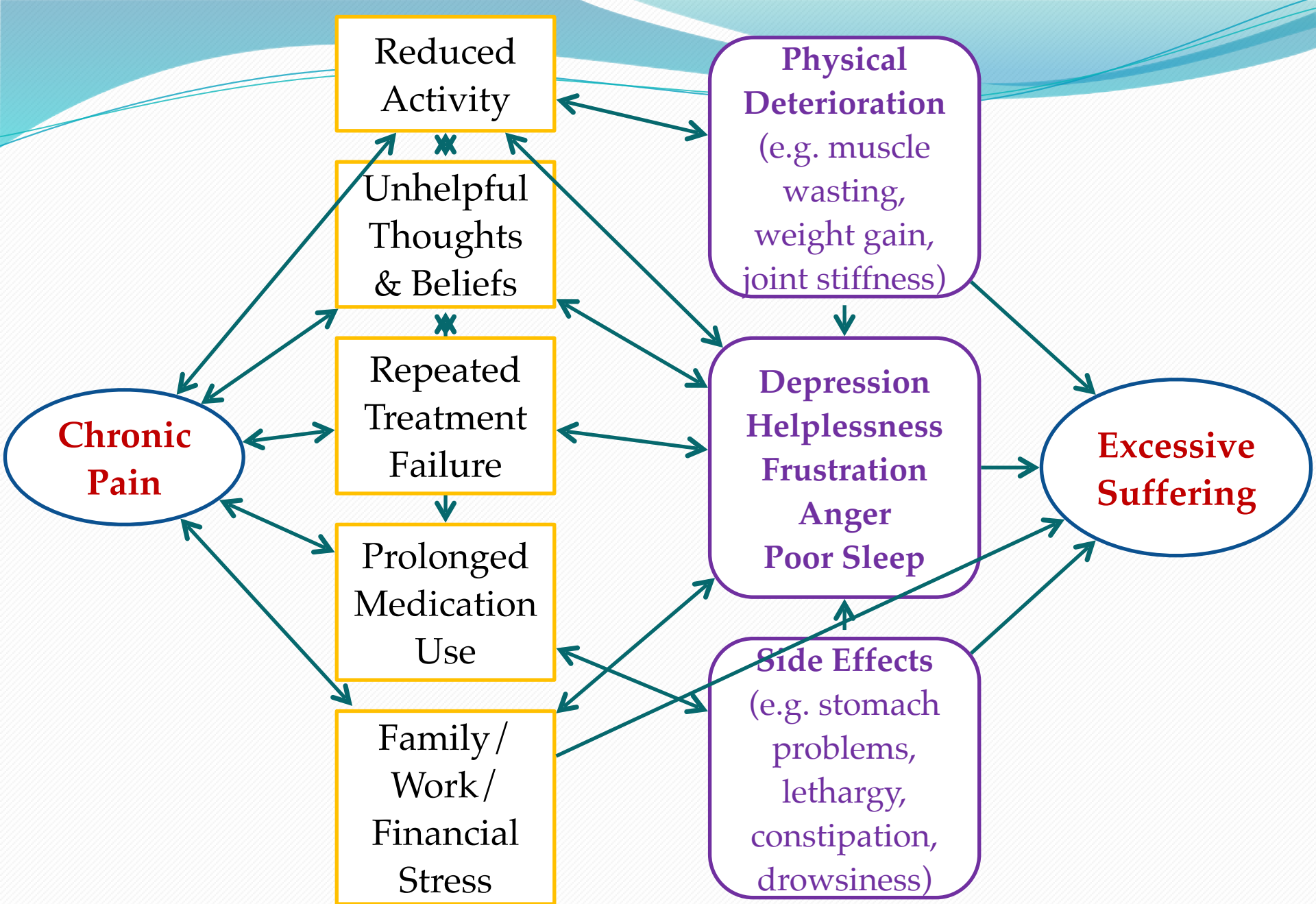
- Central Sensitization
- Nerve injury
- Ongoing inflammation
- Uncorrectable pathology

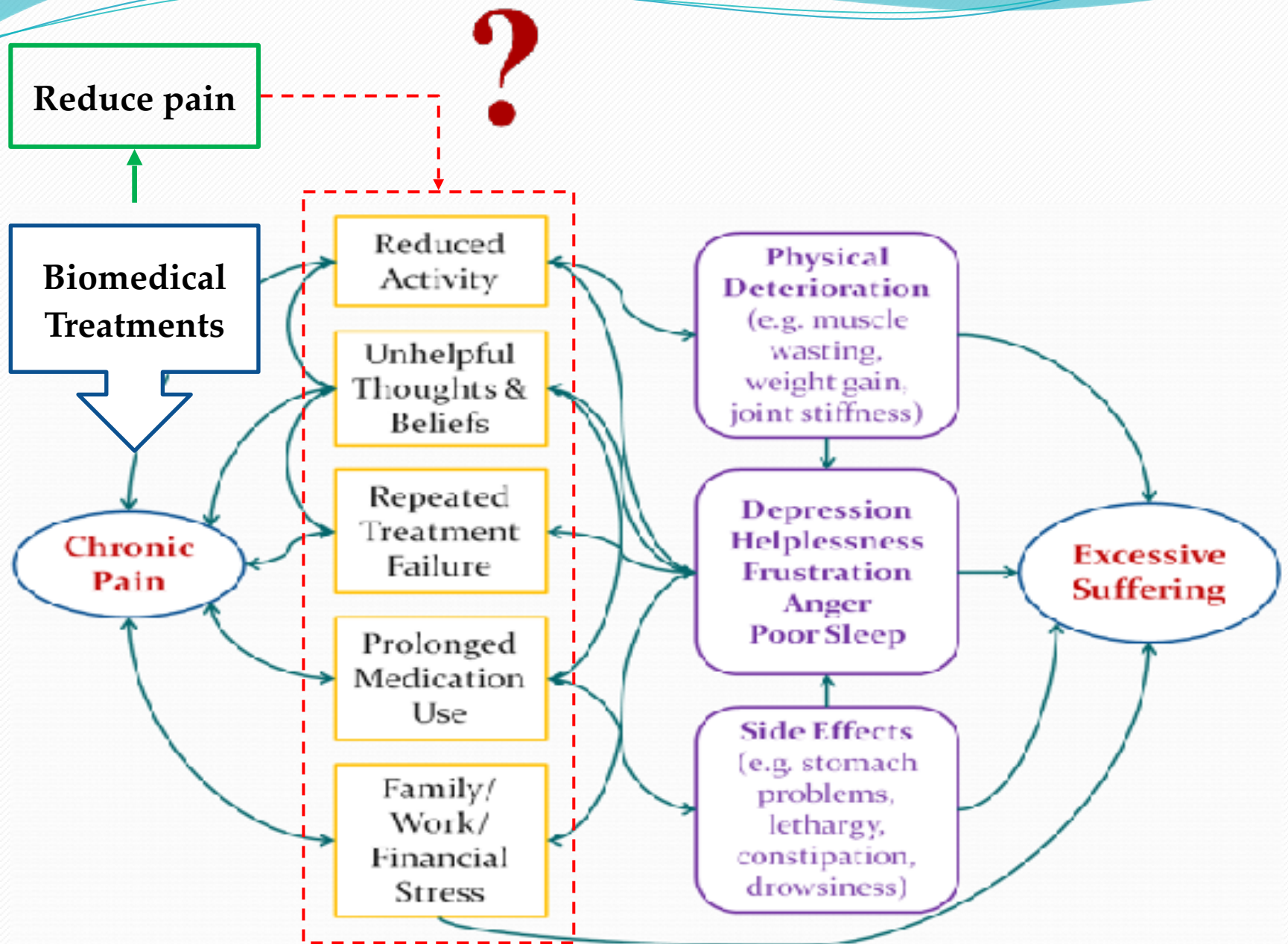


Pain is an individual experience

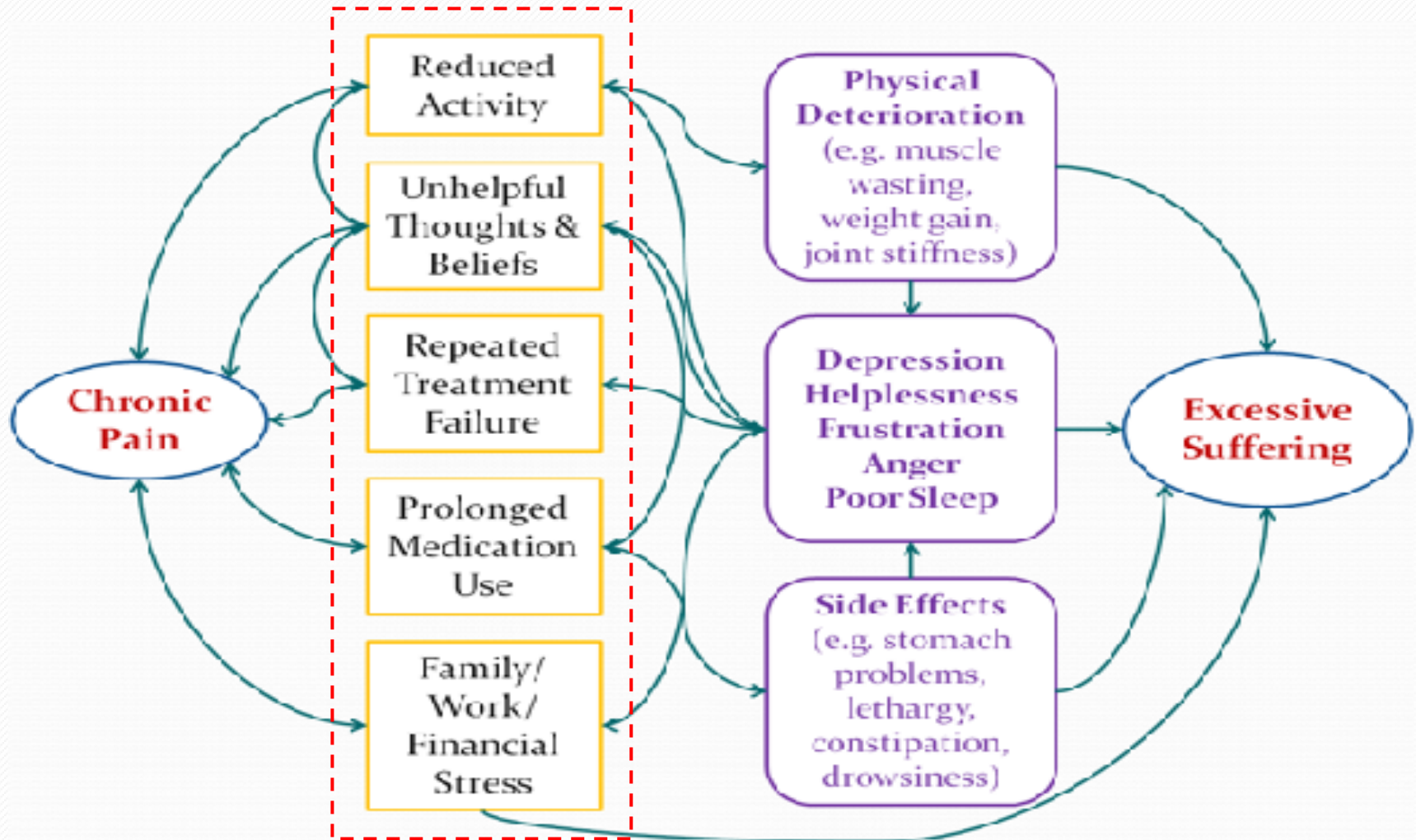


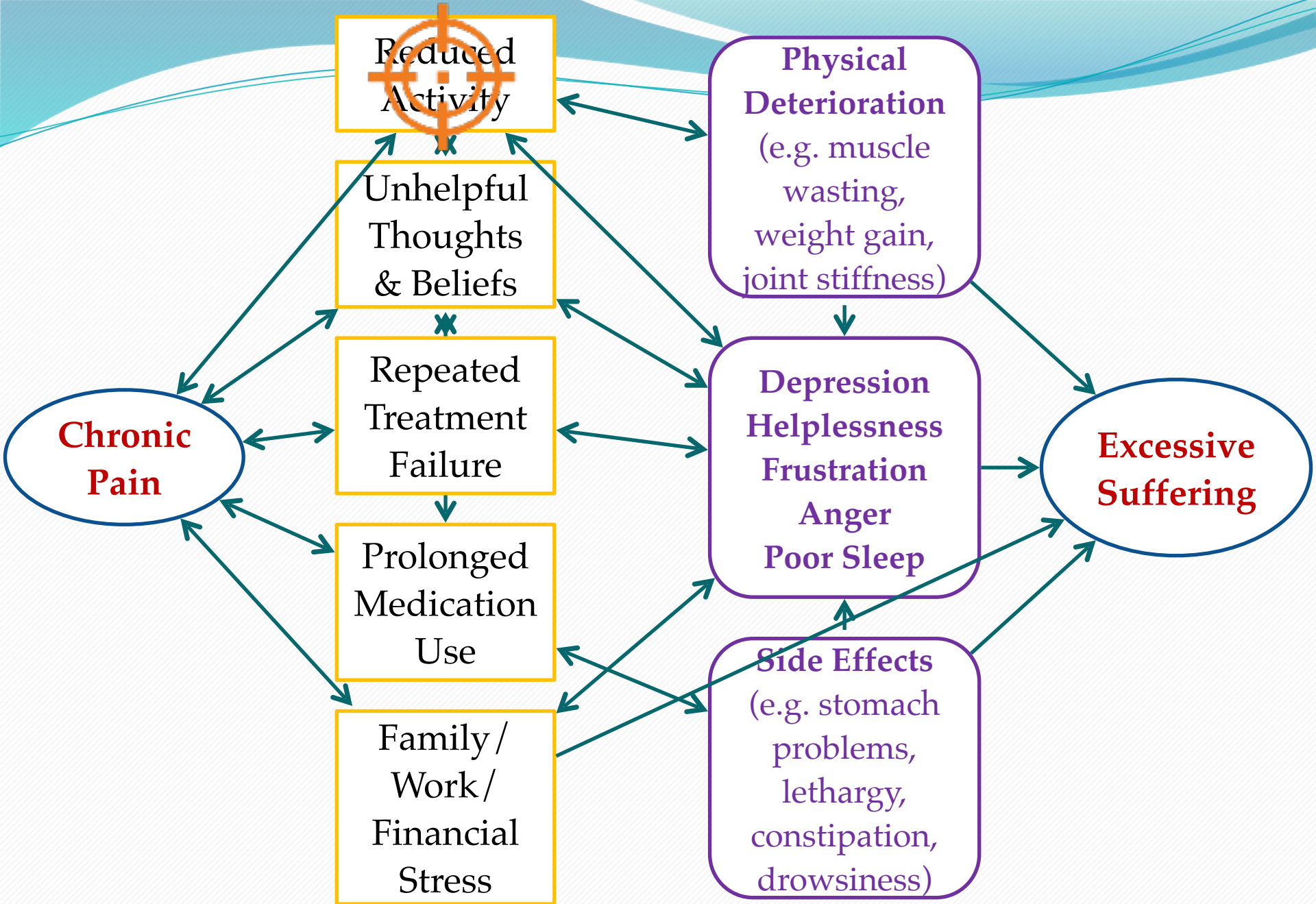
Management should be individualised



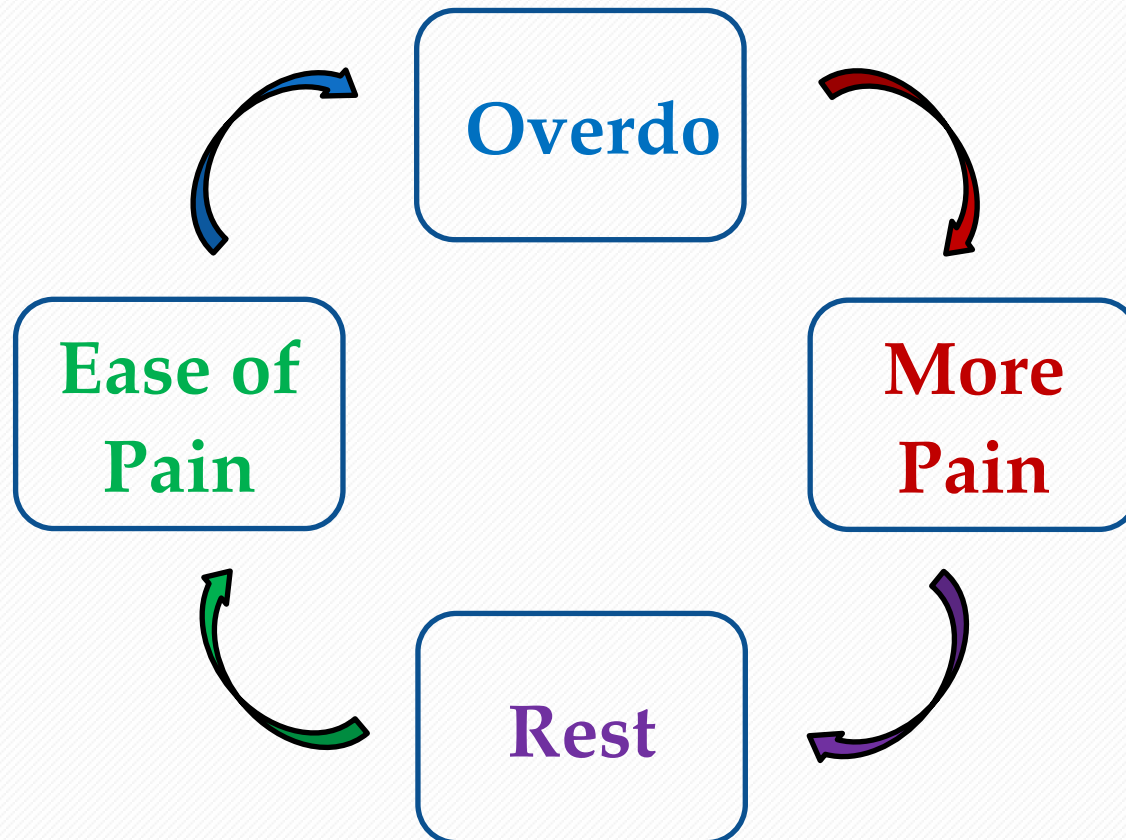


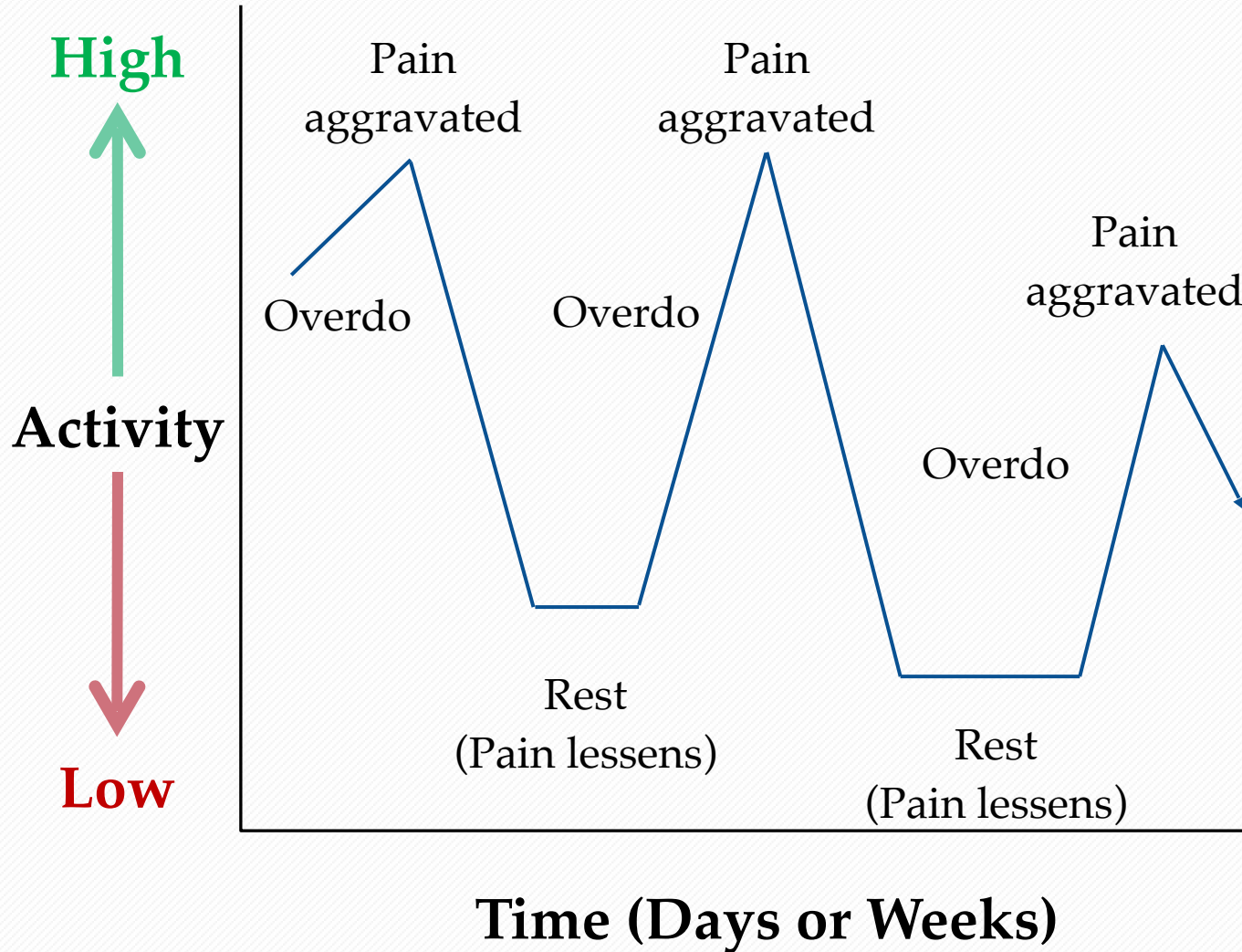
Biopsychosocial Management of Chronic Pain

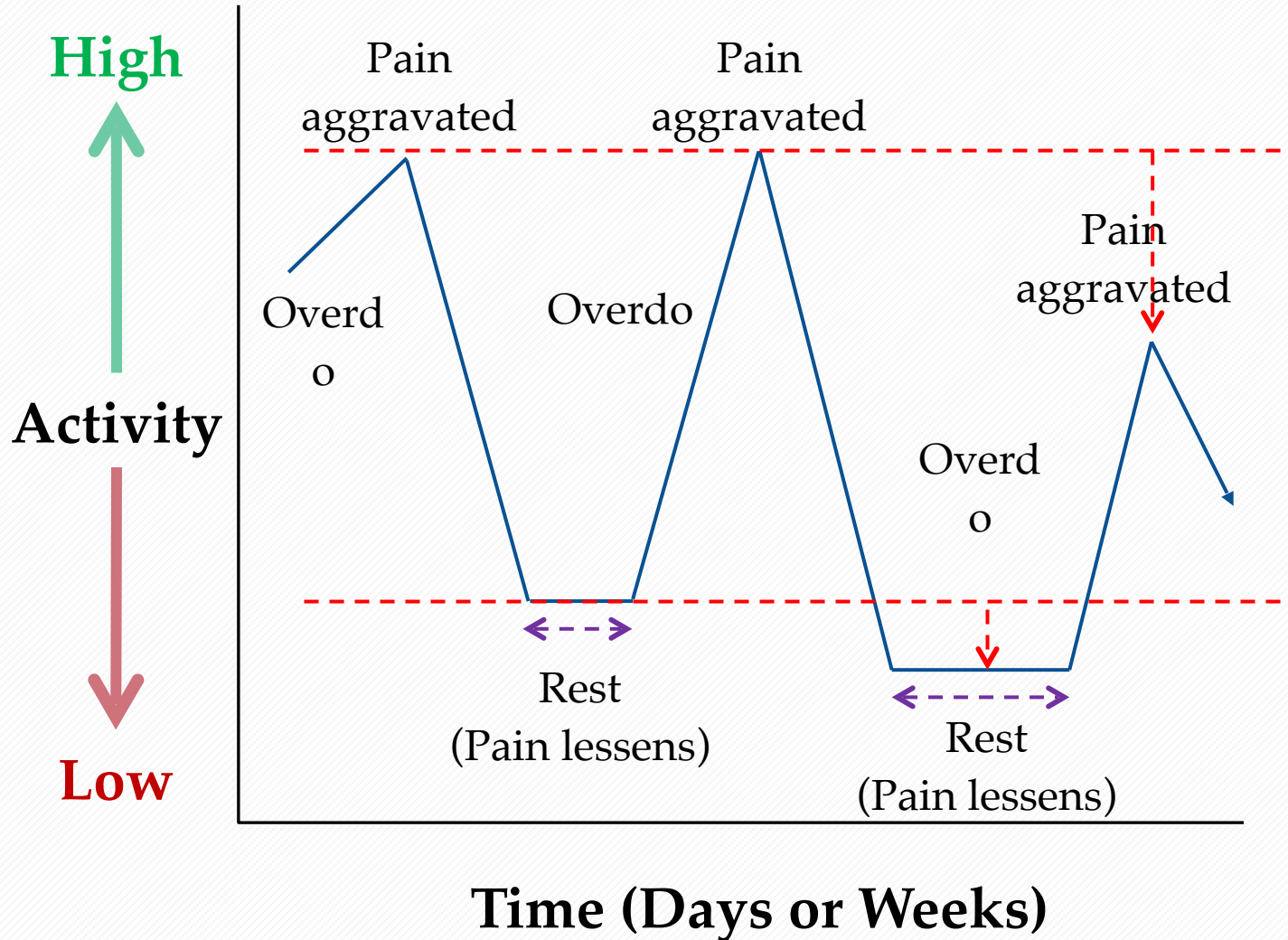




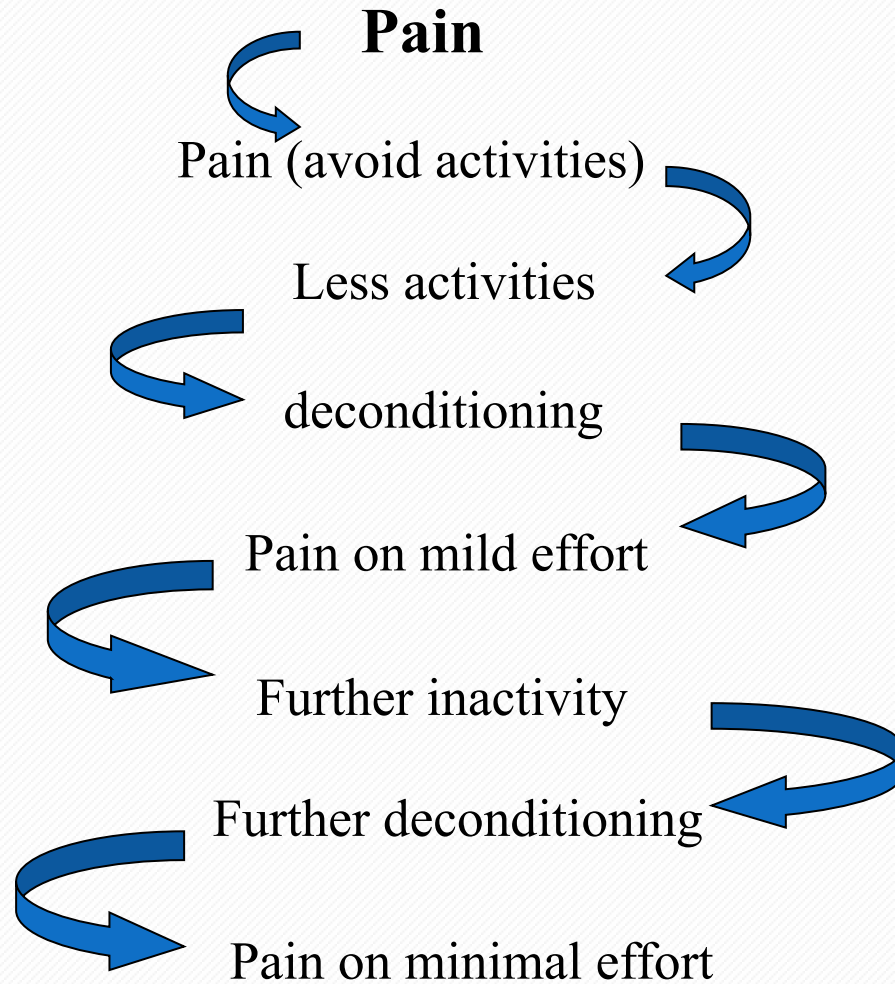
Cycle of Overdoing







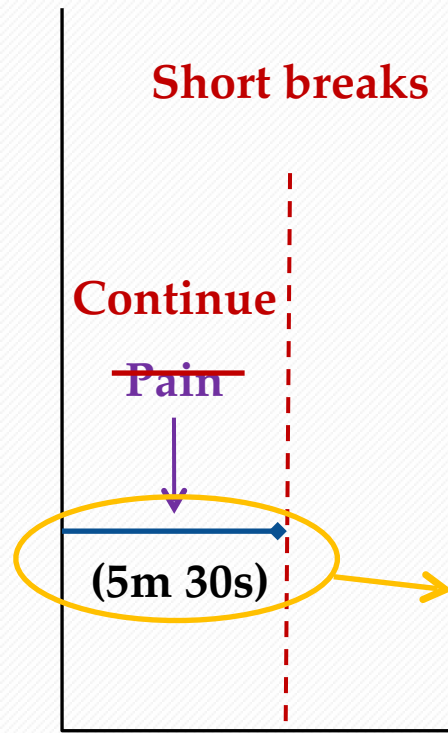
The Downward Spiral



Pacing

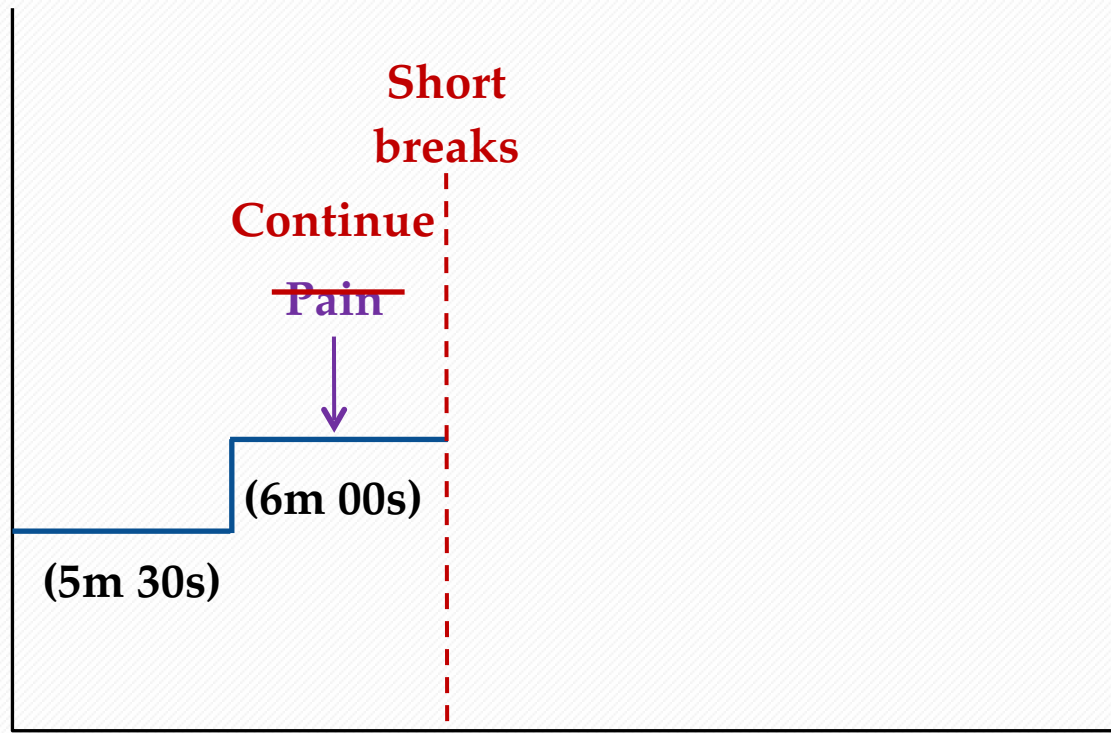
Pain → stop activity =
Controlled by pain

Plan → stop activity =
Controlled by self

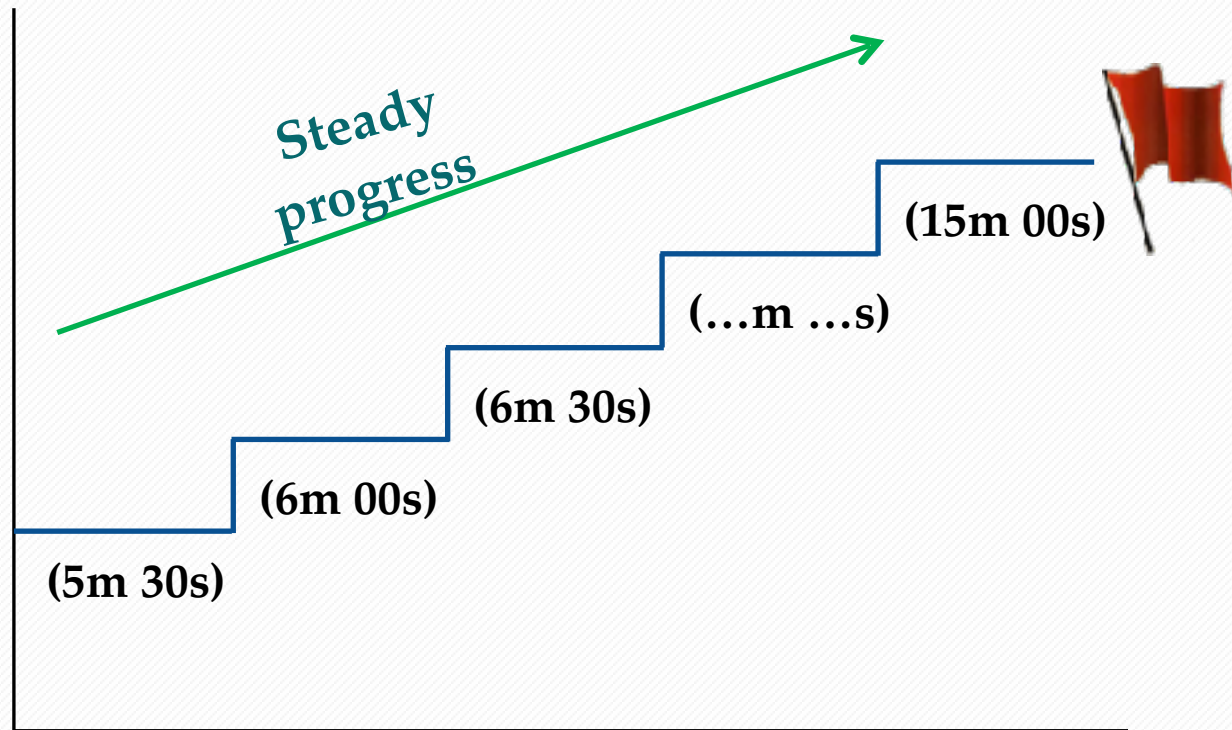


**Tolerance
building**

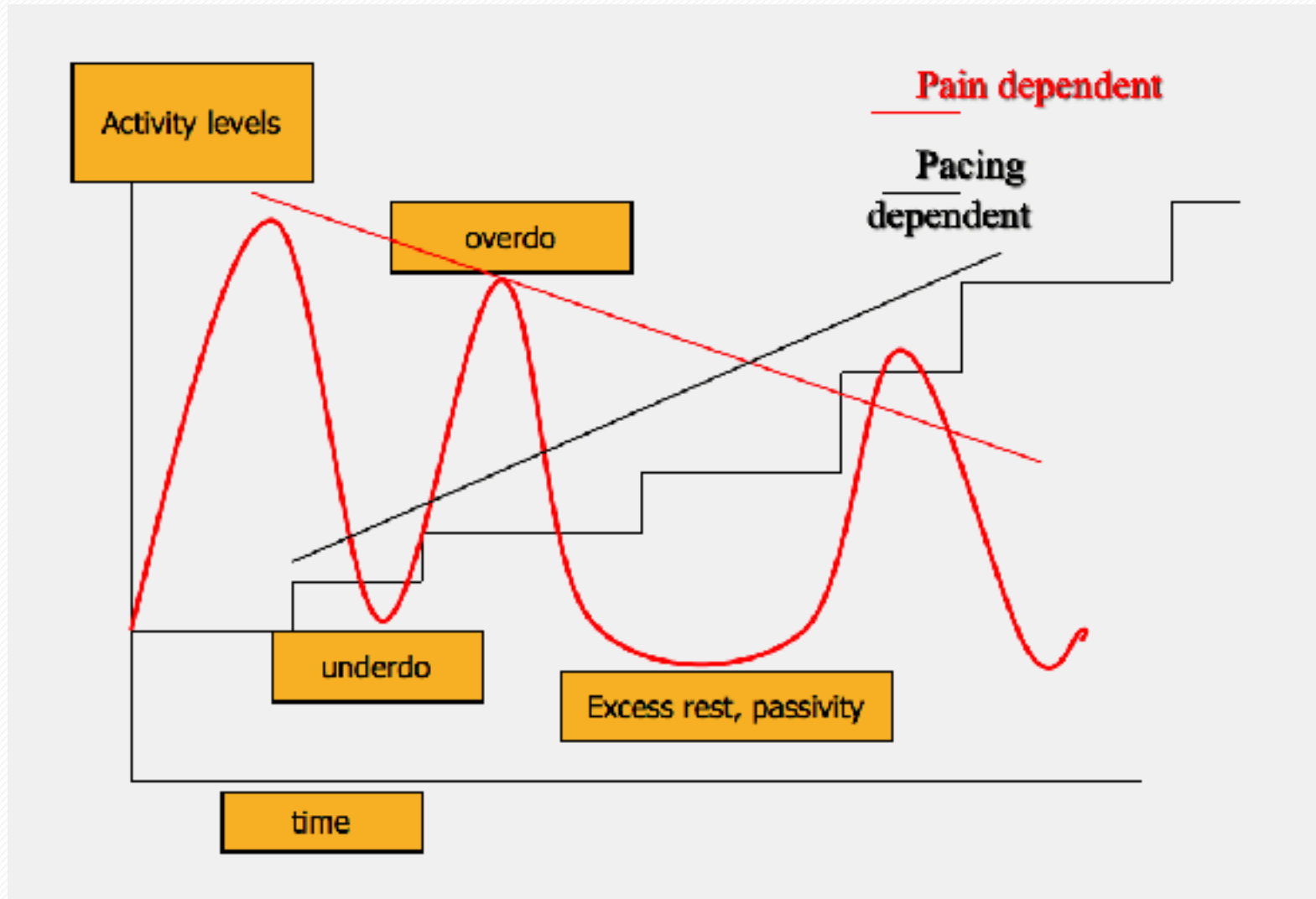
Pacing



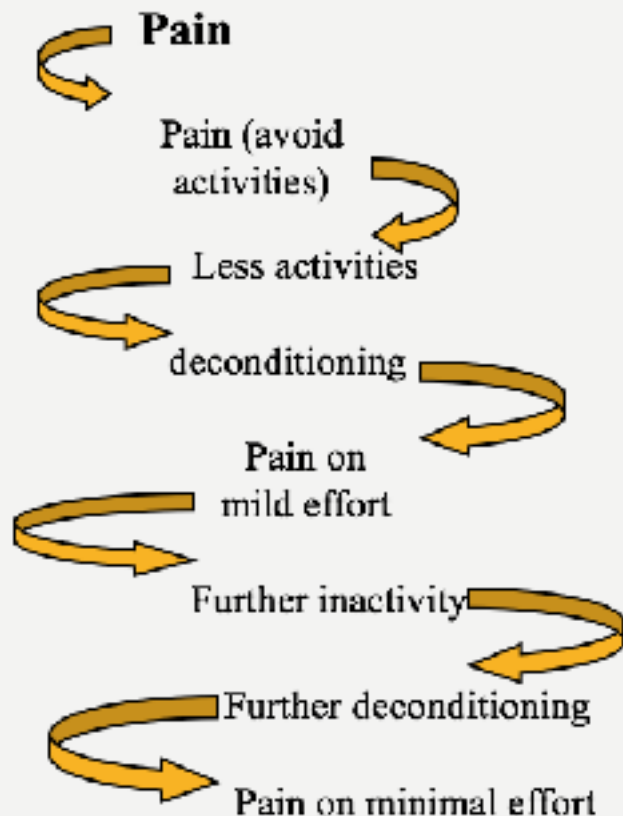
Pacing



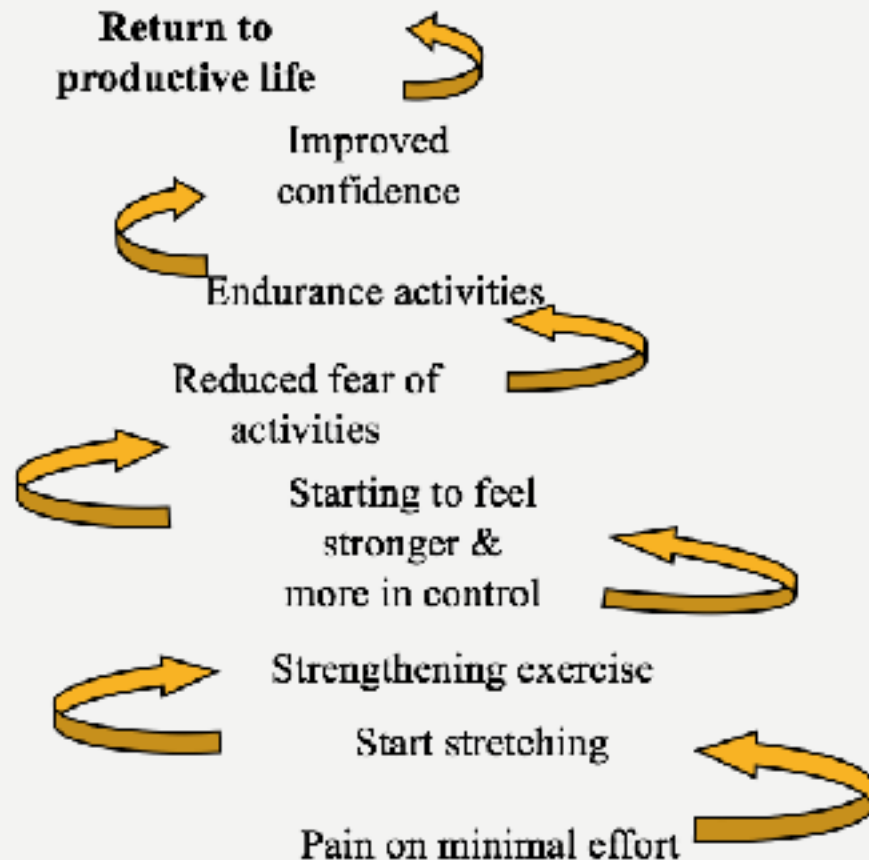
ACTIVITY PACING

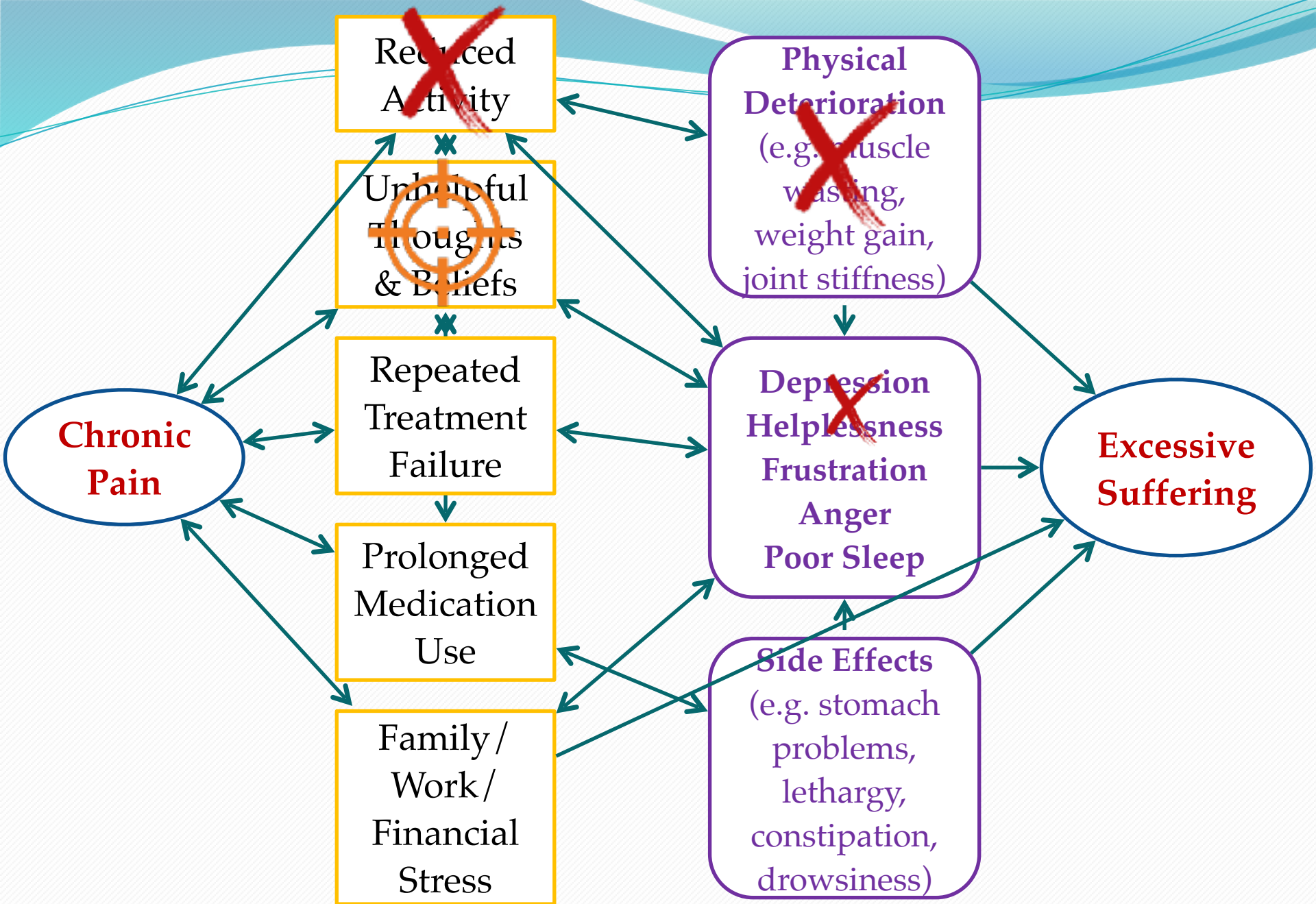


THE DOWNWARD SPIRAL



THE UPWARD SPIRAL





Cognitive Errors

- Catastrophizing
 - Assuming the worst possible outcome

Movement



**Back
Pain**



Cognitive Errors

- Should statements
 - Expecting self or others to do what they “should” or “ought to” do irrespective of the circumstances

Others **should** understand that I have pain

Doctors **should** be able to treat my pain

I am a patient! Healthcare providers **should** satisfy my needs

Cognitive Errors

- All or nothing thinking (Black or white)
 - Either perfect or failure – there is no middle ground

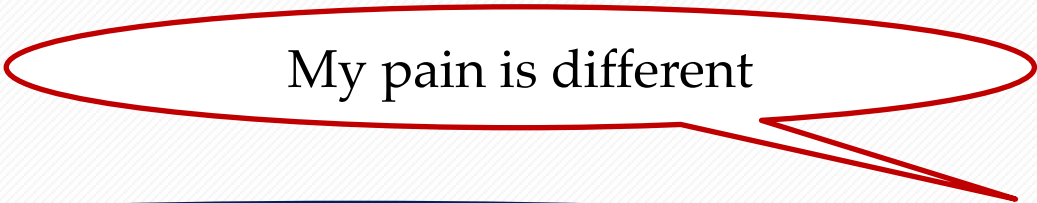


Cognitive Errors

- Filtering
 - Selectively focus on certain aspects of a situation to fit own bias



Are you saying that my pain is not
real?



My pain is different



That ONE doctor told me that my pain can be
cured

Explaining chronic pain to a patient

Rule out serious pathology (red flags)

Difference between acute and chronic pain

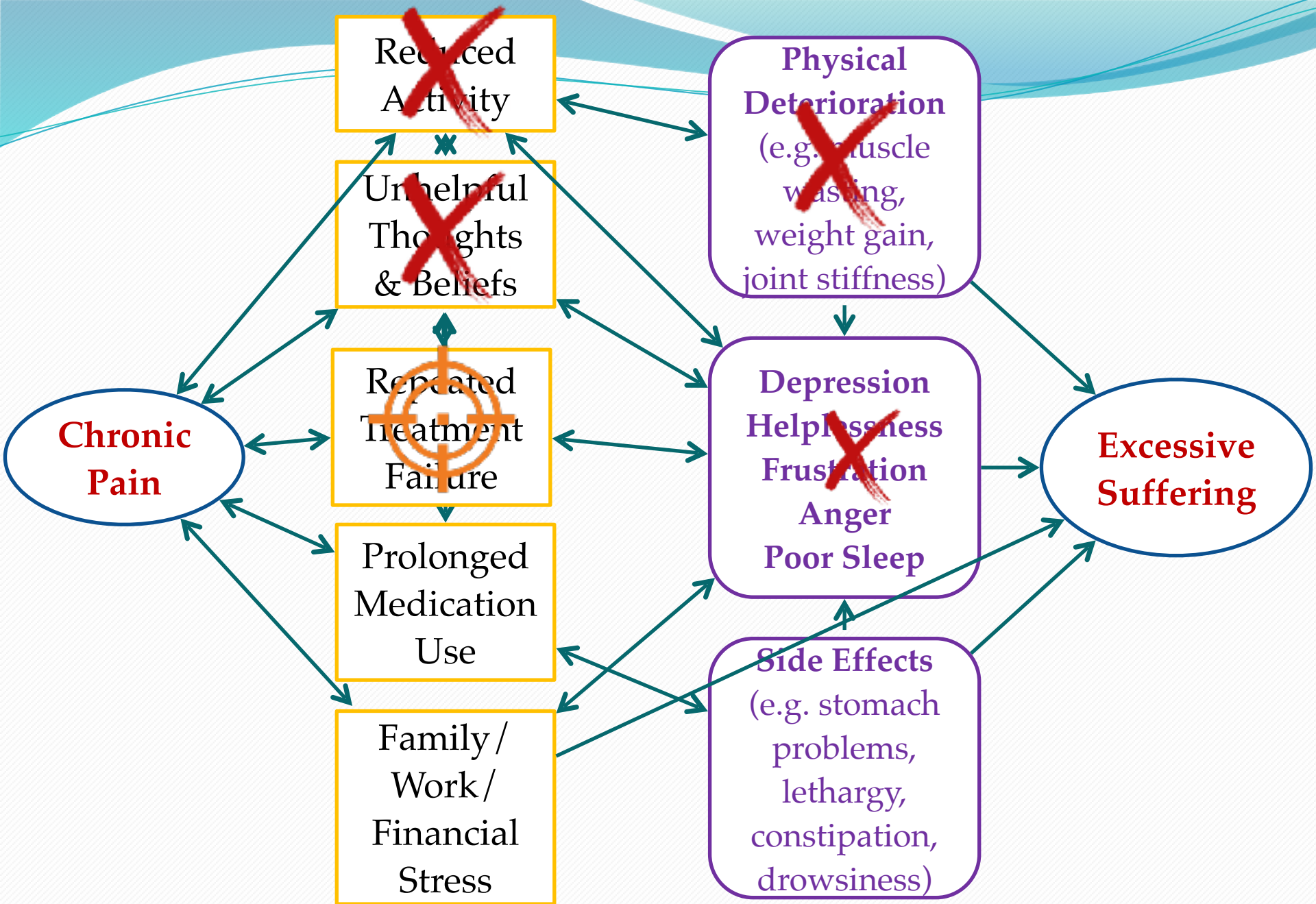
- Validate patient's experience of pain (*chronic pain is real pain*)
- Different mechanisms (*role of "sensitisation"*)
- Different treatments and different focus

—> Acute pain focus on pain relief, typically use medication, procedures, hot/cold stimulation, relaxation, natural healing processes

—> Chronic pain focus on function - reducing impact of pain on the patient's daily life, activities *despite* pain

- Emphasise active role of patient and family – education, exercise, gradual increase in activities, relaxation, coping skills, goals
- Less focus on medication, procedures.

—> **SELF MANAGEMENT**



Solution

Normal Again

Cure

Pain Relief



**Chronic
Pain**



Further injury

Disappointment

Hopelessness

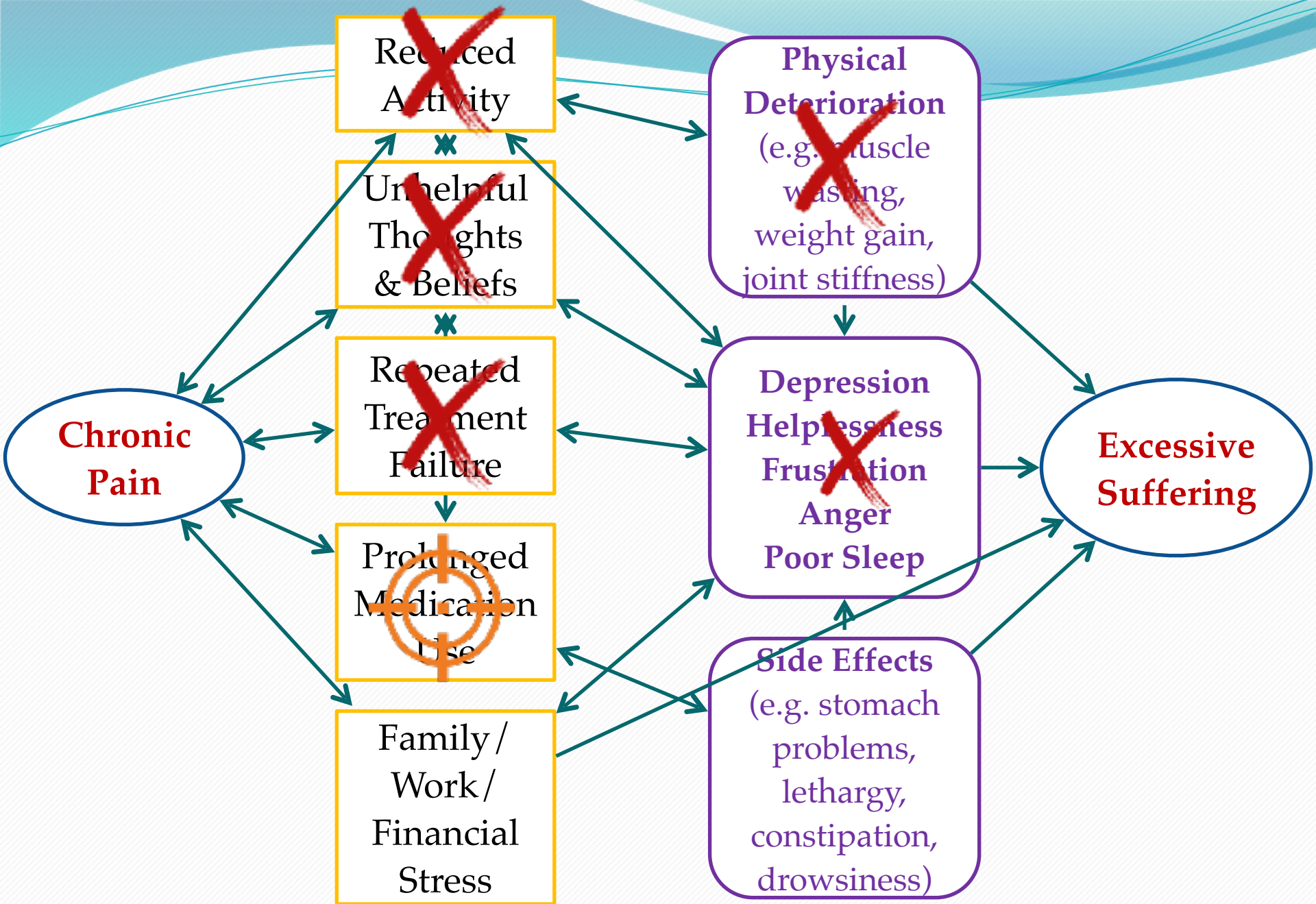
FAILED

Biomedicalization

Loss of trust

My pain has to be treated biomedically

I have to keep looking for cure



Side Effects:

Dry mouth
Blurred vision
Headache
Weight gain
Constipation
Nausea & Vomiting
Dizziness
Drowsiness
Addiction
Dependence
Etc....

I can't do anything without my meds

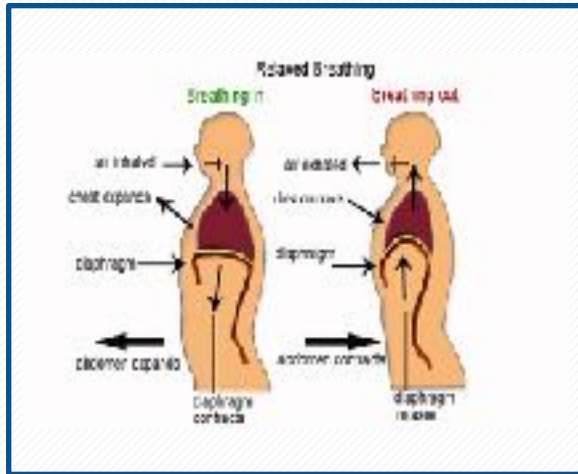
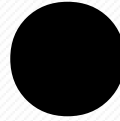
Do I have to take it forever?

Biomedicalization



Loss of autonomy
Poor self-efficacy

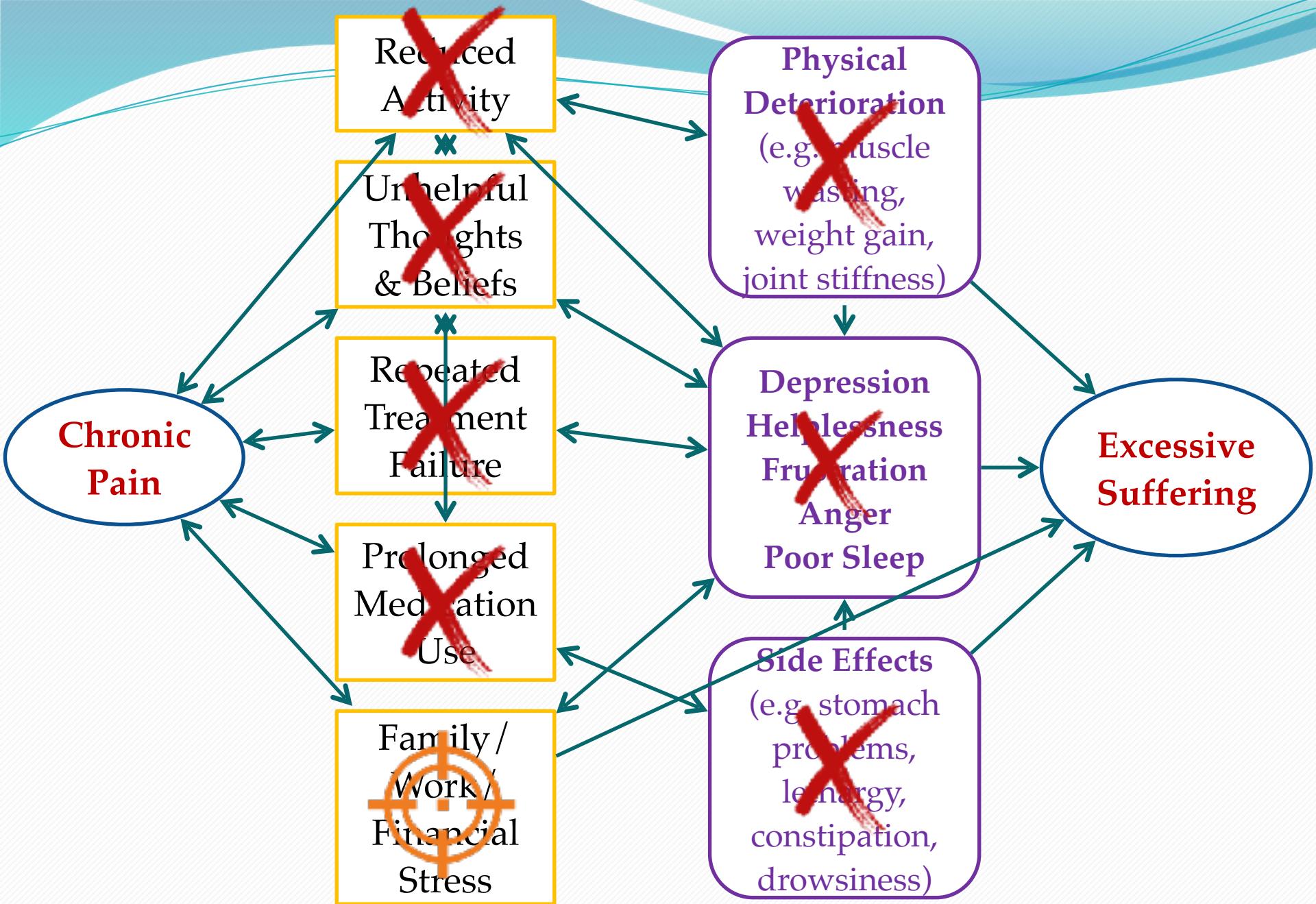




Self-Management Strategies

Choice
Vs.
Necessity







Lack of support
Overprotective
Misunderstanding
Loss of identity
Abandonment
Etc...

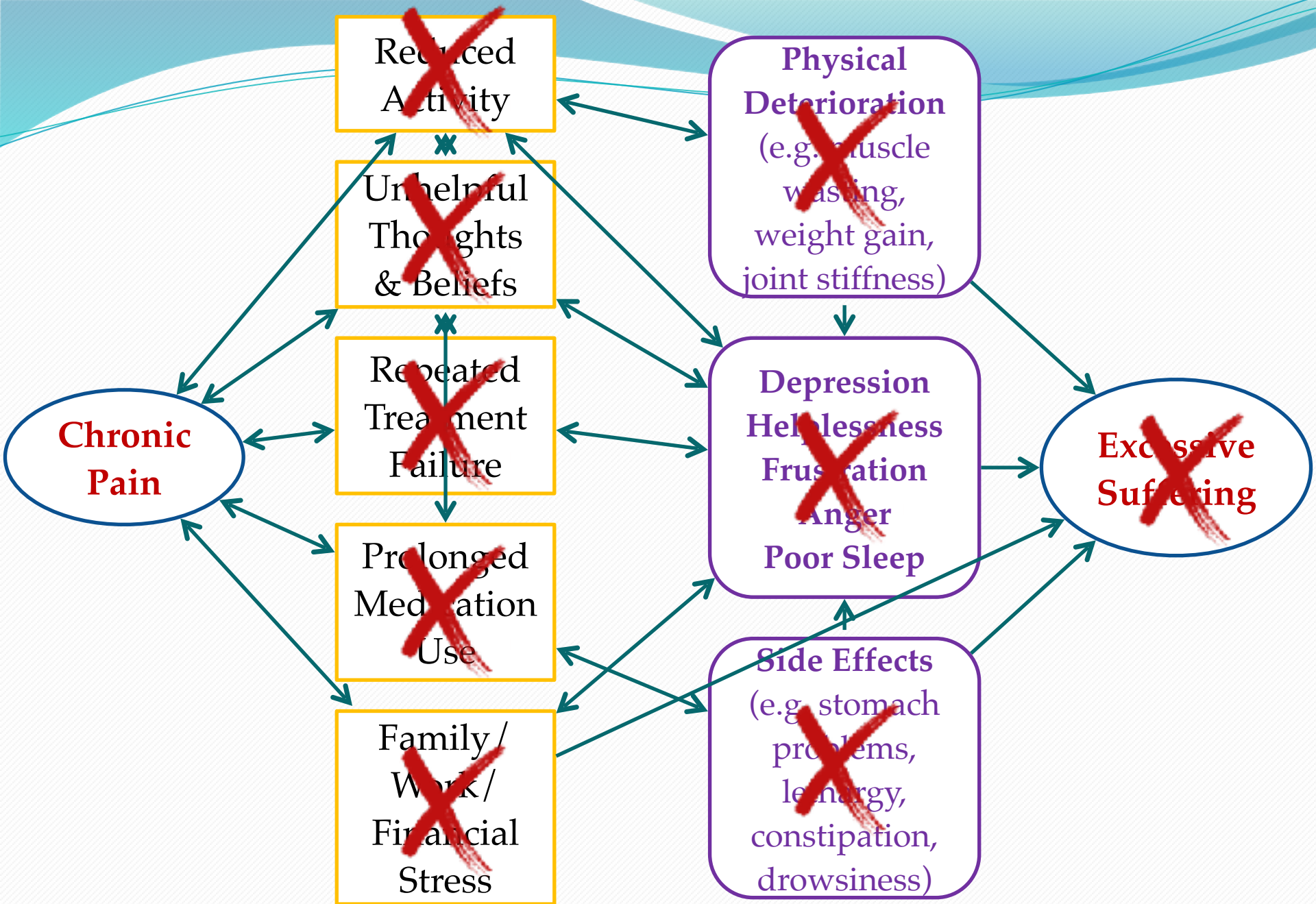
Communication
Skills

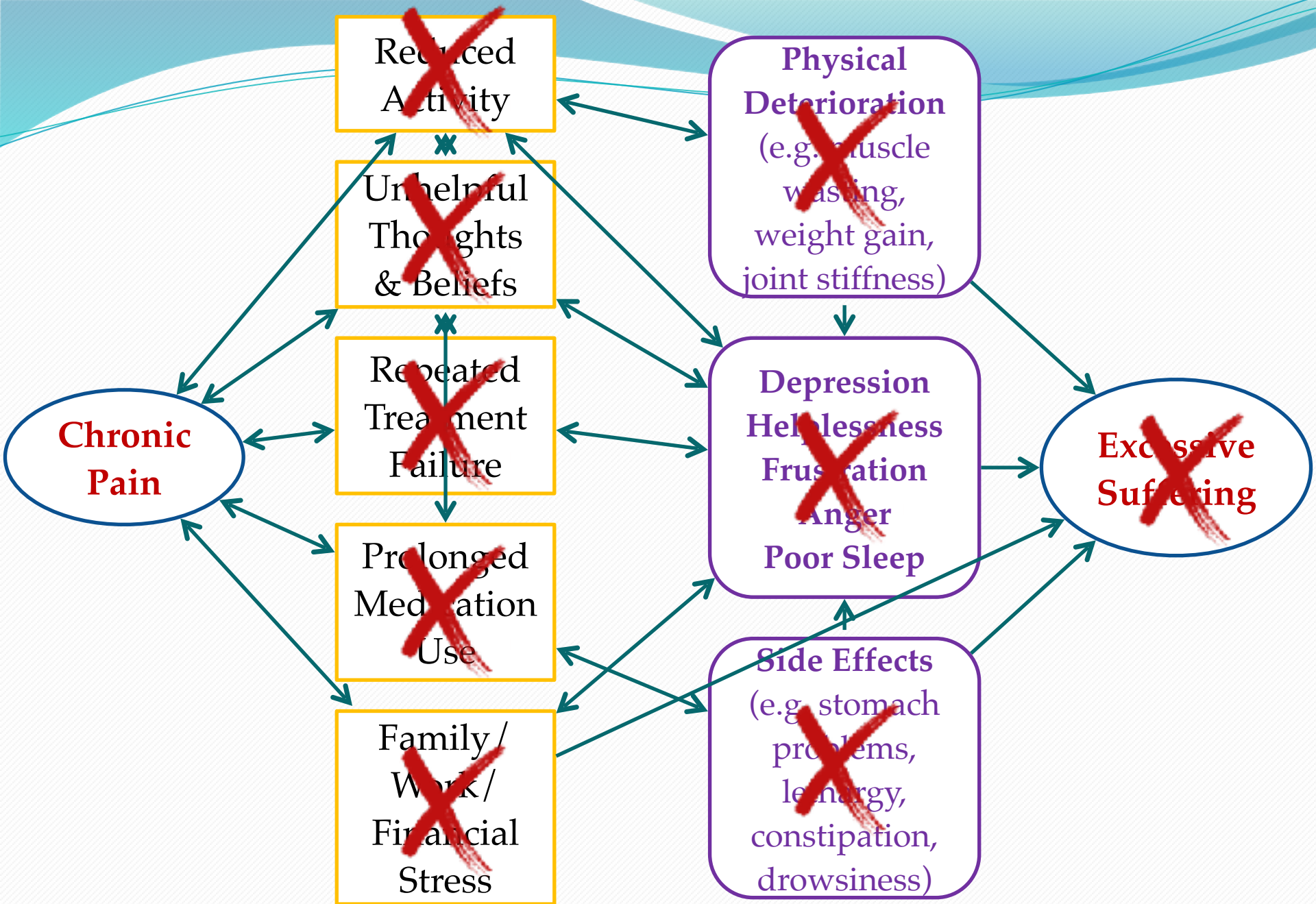
Reduced capability
Absenteeism
Workplace discord
Stigmatization
Unemployment
Etc...

Problem Solving
Skills

Loan and debts
Medical expenses
Living expenses
Loss of income
Compensation
Etc...

Stress
Management





Summary

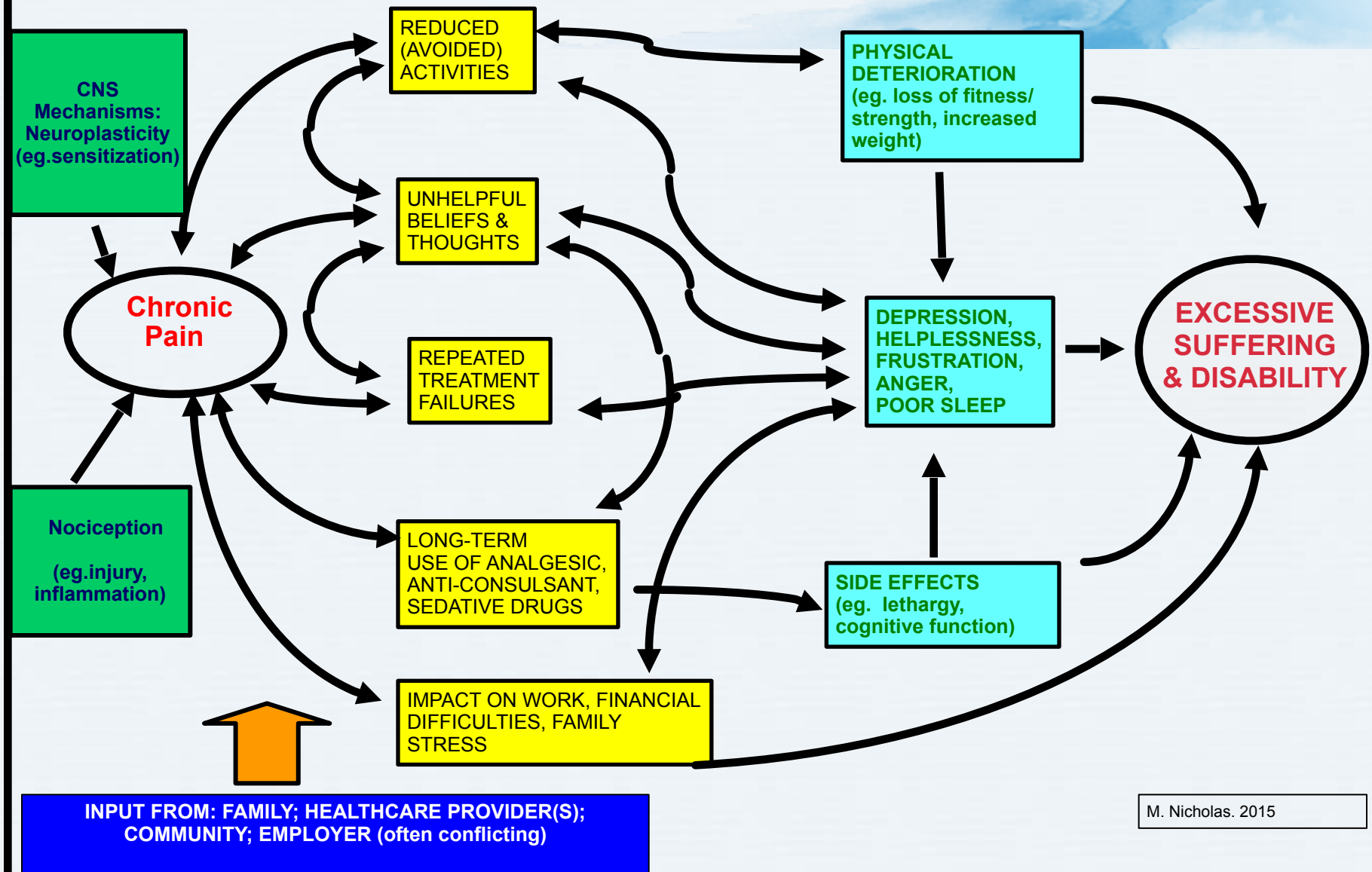
- Suffering in chronic pain is a dynamic process
- The biopsychosocial model of pain management
 - targets on the underlying processes that leads to excessive suffering in chronic pain
 - requires a multidisciplinary team
 - is evidence-based and has been shown to reduce overall pain and improve quality of life

Two examples

Example 1

- 40 year old man, works as a bank officer, married with 3 children, all still schooling. Wife works as schoolteacher, no financial problems.
- % low back pain x 5 days, started after he spent a day doing gardening, including digging and lifting heavy pots
- Pain is dull aching, sometimes sharp (with movement), pain score 4/10 by may go up to 7/10 at times.
- Did not take time off from work but back pain is not getting better, so he went to see his GP
- Has had back pain before, last episode about 1 year ago. Usually lasts 1-2 days with rest, goes off by itself without any treatment.
- Taking Paracetamol and Diclofenac PRN - some pain relief, but tries not to take because of epigastric pain
- On examination - tenderness at L3/4/5 levels on both sides, no neurological deficit in both LL, ROM of spine somewhat limited
- Keen to continue working. Usually does regular exercise (cycling/jogging) but stopped since 5 days ago.

Treatment framework when pain persists: A biopsychosocial perspective



Example 2

- 45 year old man, bank officer, married with 3 children.
- % low back pain x 15 years, had lumbar discectomy 10 years ago, was pain free for 2 years, then pain recurred
- Pain described as a constant dull ache, “24 hours a day”, pain score most of the time 7/10, may go up to 10/10 “when I am stressed”, no relieving factors. Pain is mainly in the low back but sometimes has shooting pain down his left leg.
- Has had many treatments including physiotherapy, spinal manipulation, acupuncture.
- Has tried many pain medications including tramadol, celecoxib, oxycodone, gabapentin and pregabalin. “nothing works” but currently taking prcegablin 150 mg BD, celecoxib 200 mg BD (sometimes 400 mg), and tramadol 100 mg 3-4 times a day.
- Expresses frustration with his treatment and is thinking of stopping all treatment.
- Spends most of the day lying down, but complains that he is unable to sleep at night due to pain.

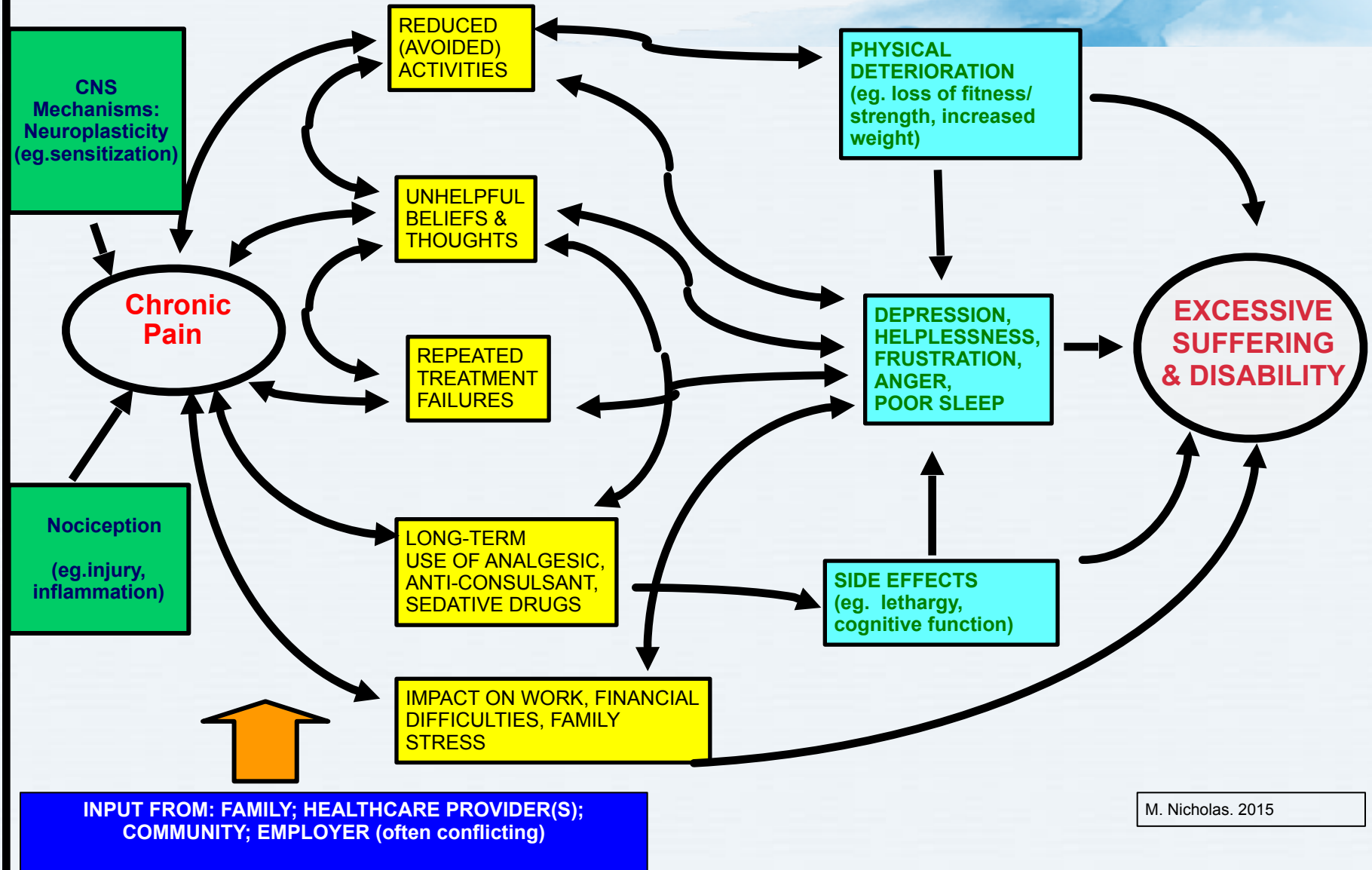
Example 2

- Has been on unpaid leave for 1 year; threat of losing job Savings used up for treatment and family expenses.
- Wife (teacher) has to run tuition classes after school to supplement their income. Eldest son did not go to college, working in MacDonalds. 2 other kids still in school.

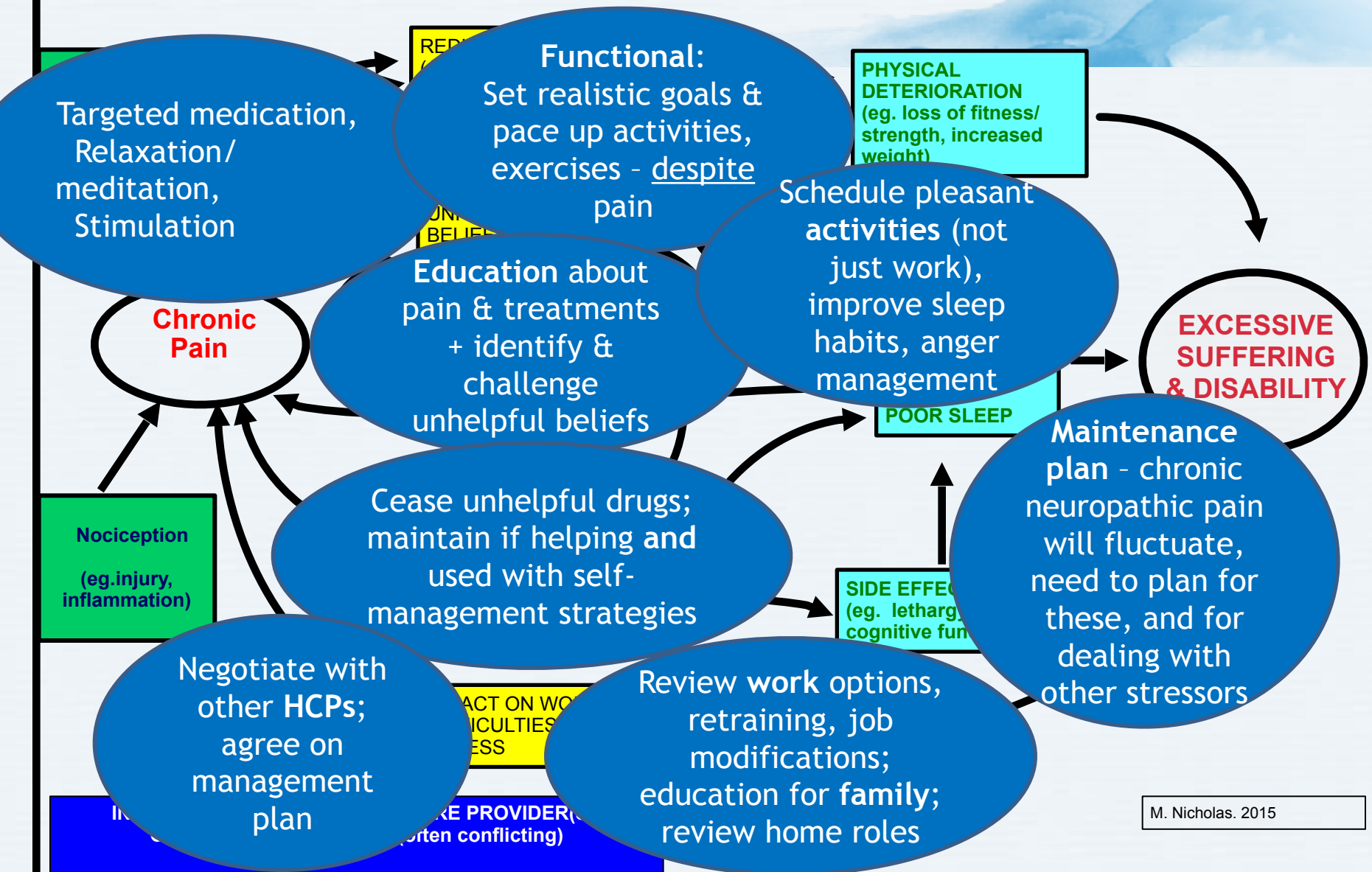
On examination

- Irritable, unable to sit still, keeps shifting position
- Spine examination - loss of lumbar lordosis, tenderness and spasm of paravertebral muscles from L2-L5 on both sides, limited ROM (all movements), SLR on L side limited to 30 degrees, muscle power reduced on L LL (grade 4/5) with no sensory deficit.

Treatment framework when pain persists: A biopsychosocial perspective



Treatment framework when pain persists: A biopsychosocial perspective



Pain Self Management

How should chronic pain be managed?

REPORT BRIEF 28 JUNE 2011

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Advising the nation • Improving health

For more information visit www.iom.edu/relievingpain

Relieving Pain in America

A Blueprint for Transforming Prevention, Care, Education, and Research



Ongoing **self-management** by those with chronic pain, supported by their health care providers, best option.

What is pain self-management?



Pain 113 (2005) 249–250

PAIN

www.elsevier.com/locate/pain

Editorial

Active self-management of chronic pain in the community

Blair H. Smith*, Alison M. Elliott

- promotion of an individual's understanding of his or her own health and its maintenance;
- provision of reliable information about illnesses and treatment or self-care options and how to access these appropriately; and
- development of self-management or 'coping' skills.

Core self-management skills

- Goal setting (to provide motivation/ direction)
- Activity pacing (to achieve goals, step by step)
- Exercises (regular movement is important)
- Self-regulation (using relaxation/ meditation)
- Problem-solving (to overcome obstacles)

Core self-management skills

Identifying Goals

Putting it simply:

Goals = motivation

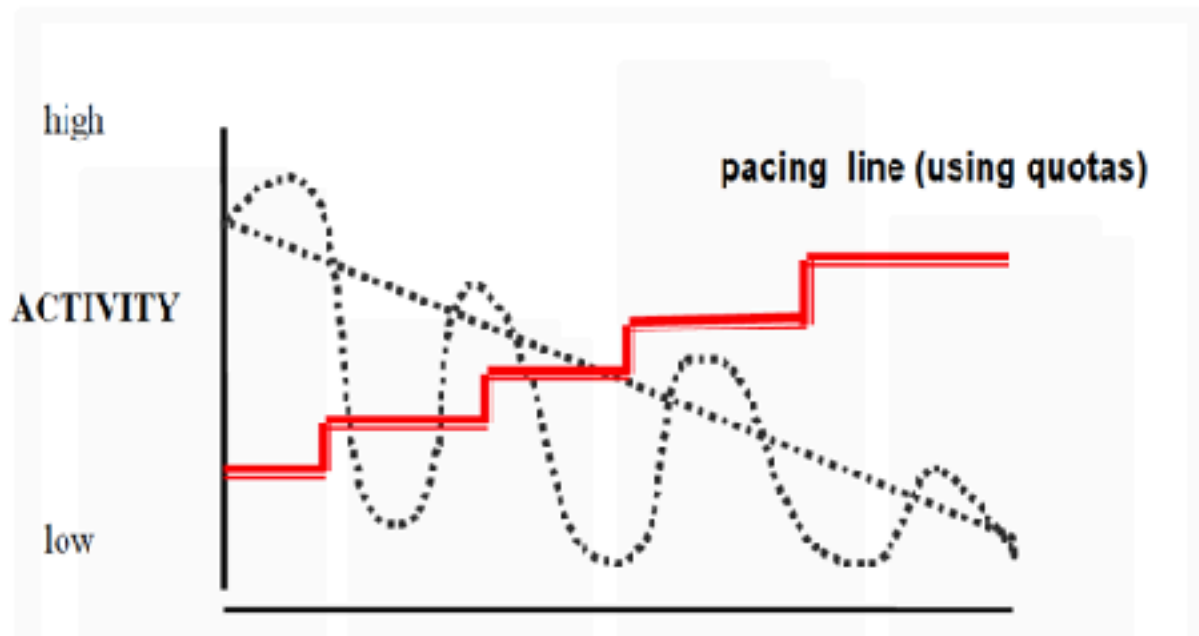
Without motivation no one is going anywhere

A person's goals must be meaningful (valued) to him/her

Core self-management skills

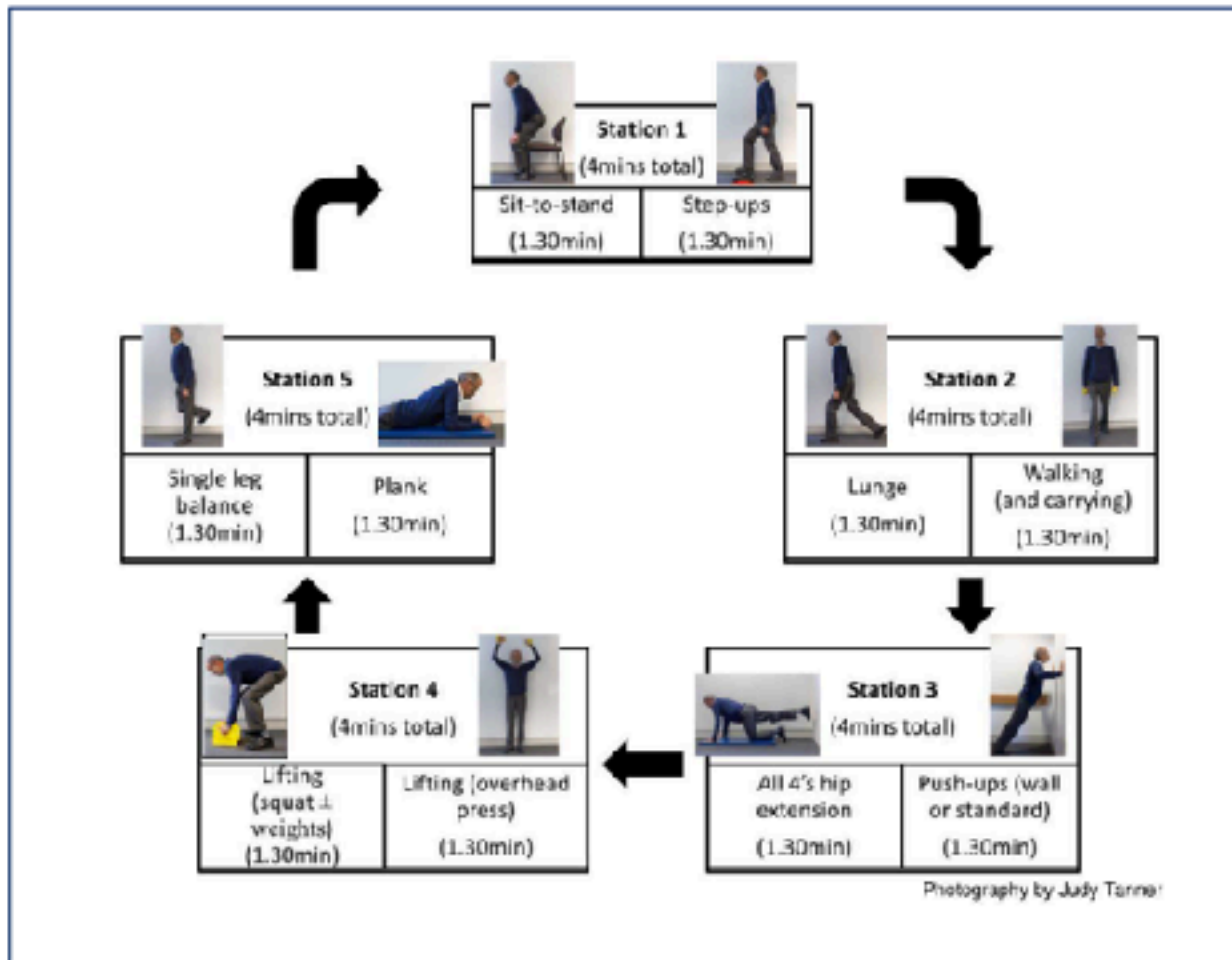
Pacing up an activity despite pain

Gradually increase activities despite pain – using quotas



Core self-management skills

Simple exercise circuit



Core self-management skills

Applied Relaxation Training

- Can help to reduce or calm bothersome feelings (eg. when feeling stressed)
- The difference is that it is meant to be **used (and practised) in stressful situations**, not just when there is time and peace
- Like all skills, its effectiveness requires frequent practice

Core self-management skills

Problem-solving

A simple framework for identifying a problem and choosing ways of dealing with it

The good news about problem-solving is that your patients will already be able to do it, but they may not be applying it so well to their pain.

You can help them to do this.

Core self-management skills

- Goal setting (to provide motivation/ direction)
- Activity pacing (to achieve goals, step by step)
- Exercises (regular movement is important)
- Self-regulation (using relaxation/ meditation)
- Problem-solving (to overcome obstacles)

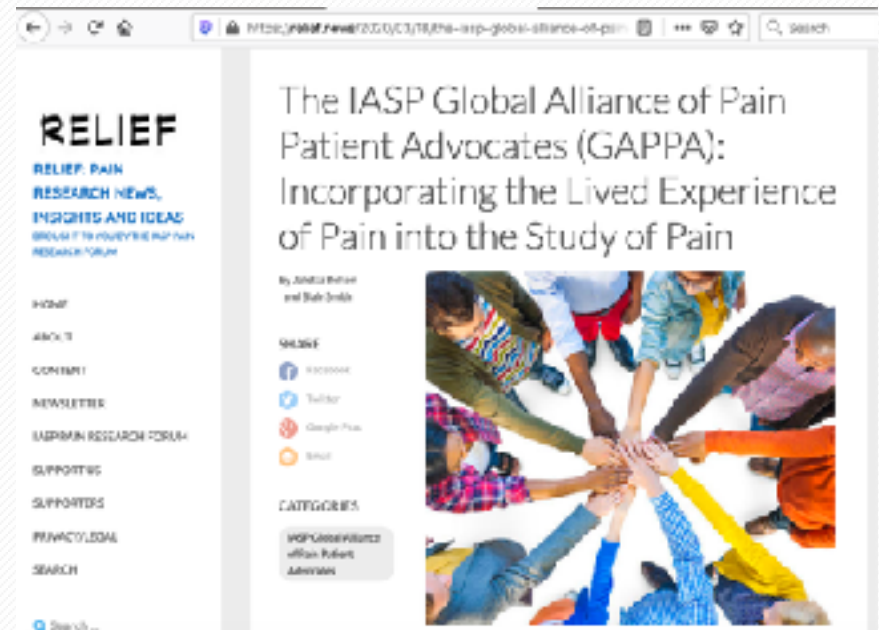
Self-management vs treatment: harder to sell

Treatment	Self-Management
Treatment provider does something to patient	Done by the person in pain
Treatments specific (pills, injections)	Less specific, difficult to measure
Requires a clinic and health professional	Applied in daily life settings
Accepted role in community	Community may not understand or accept readily
Financially supported by health system	May not be taken seriously by health system – little funding
Effectiveness limited and each condition treated separately	Effective, if done, and may be generalizable across chronic conditions (eg. exercise, diet)

How may we help patients accept and engage in pain self management

- Von Korff et al (1997) wrote of “collaborative care”
- Collaborative care = patients + providers:
- shared goals,
- sustained working relationship,
- mutual understanding of roles / responsibilities,
- requisite skills for carrying them out.

Patient education and support



www.aci.health.nsw.gov.au/chronic-pain

<https://relief.news/2020/03/18/the-iasp-global-alliance-of-pain-patient-advocates-gappa-incorporating-the-lived-experience-of-pain-into-the-study-of-pain/>

Malaysia: Patient group on FB (supported by MASP)





Thank you for your attention

www.masp.org.my

www.iasp-pain.org

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