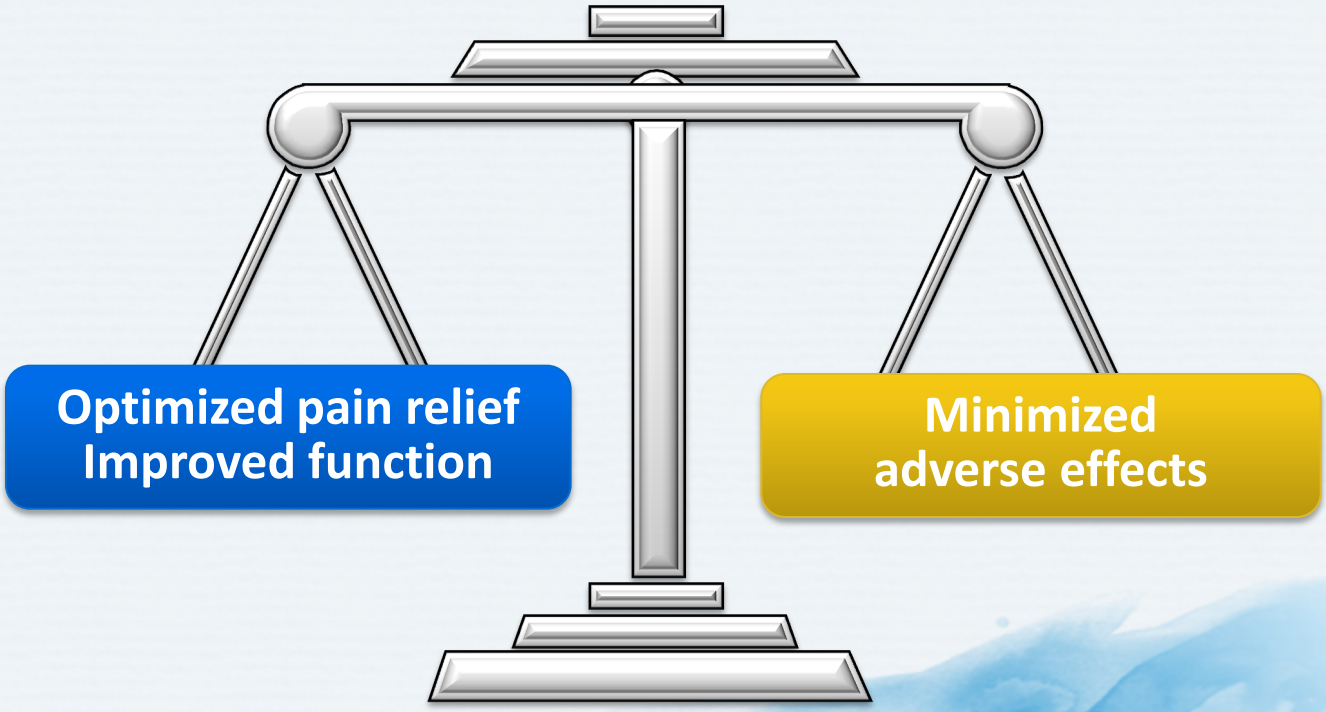
MANAGEMENT

Goals of Treatment

Goals in Pain Management

- Involve the patient in the decision-making process
- Agree on realistic treatment goals **before** starting a treatment plan



Farrar JT *et al. Pain* 2001; 94(2):149-58; Gilron I *et al. CMAJ* 2006; 175(3):265-75.

Prognosis of Patients with Fibromyalgia

- Chronic condition, but improvement frequently seen in community practice, particularly when patients are diagnosed and treated early
  - Kennedy and Felson found 66% of 29 US patients followed in an academic rheumatology referral practice indicated some improvement over 10 years
  - After 2 years of treatment with a simple regimen, Australian patients with fibromyalgia:
    - 47% no longer fulfilled Smythe or ACR criteria for fibromyalgia
    - 24.2% of patients in remission

ACR = American College of Rheumatology; US = United States

Fitzcharles MA *et al. J Rheumatol* 2003; 30(1(:154-9; Kennedy M, Felson DT. *Arthritis Rheum* 1996; 39(4):682-5.

Management of Fibromyalgia: Recommended Treatment Approach

- Multidisciplinary therapy individualized to patients' symptoms and presentation is recommended
- A combination of **non-pharmacological** and **pharmacological** therapies may benefit most patients

Non-pharmacological
• Aerobic exercise • Cognitive behavioral therapy • Patient education • Strength training • Acupuncture* • Biofeedback* • Balneotherapy*

Pharmacological

• Non-narcotic analgesics
• Analgesic antiepileptics
• Antidepressants
  – TCAs
  – SSRIs
  – SNRIs
• Muscle relaxants
• Other

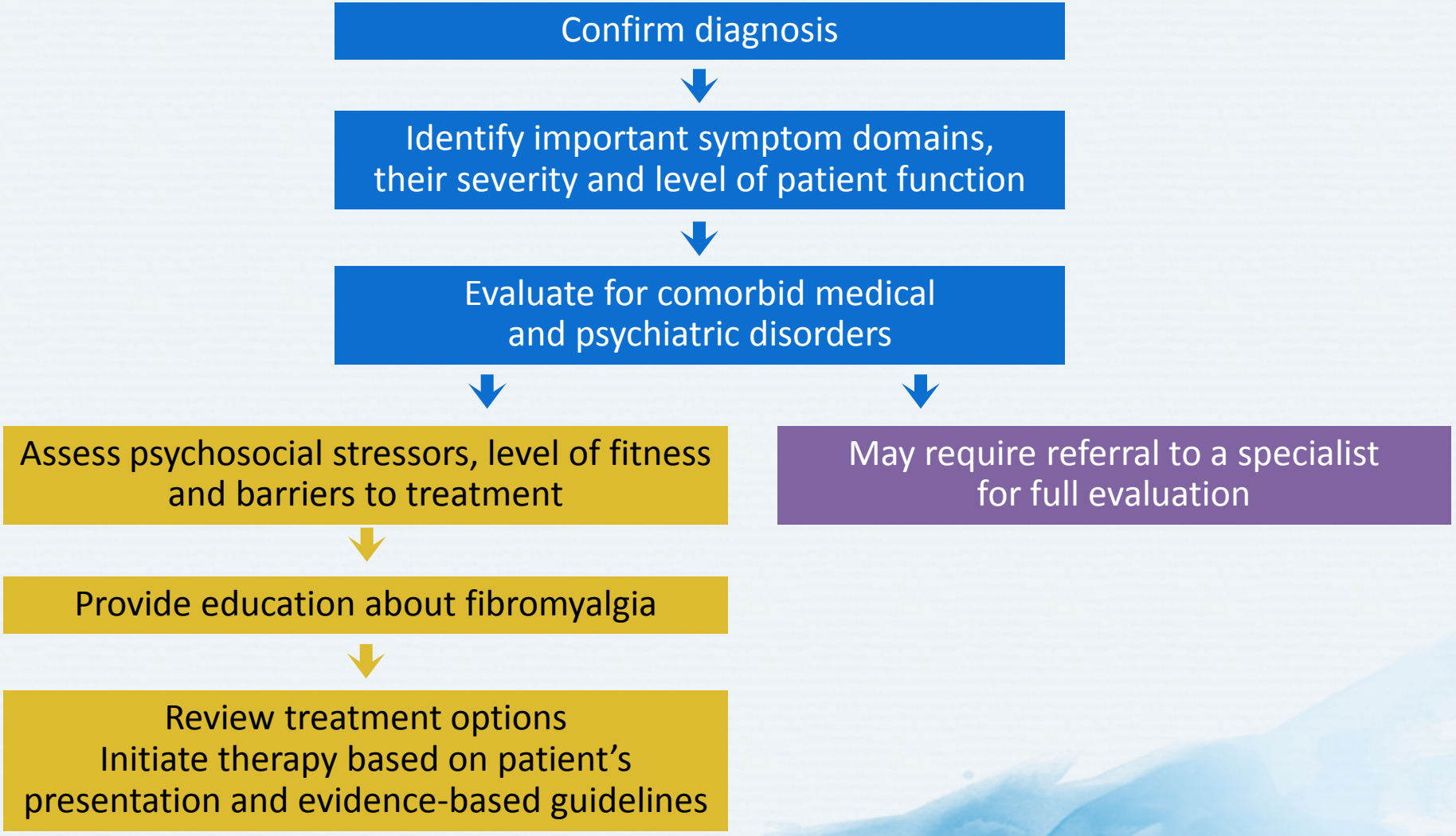
***Limited evidence for efficacy exists**

Balneotherapy: treatment of disease or health conditions by bathing

SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant

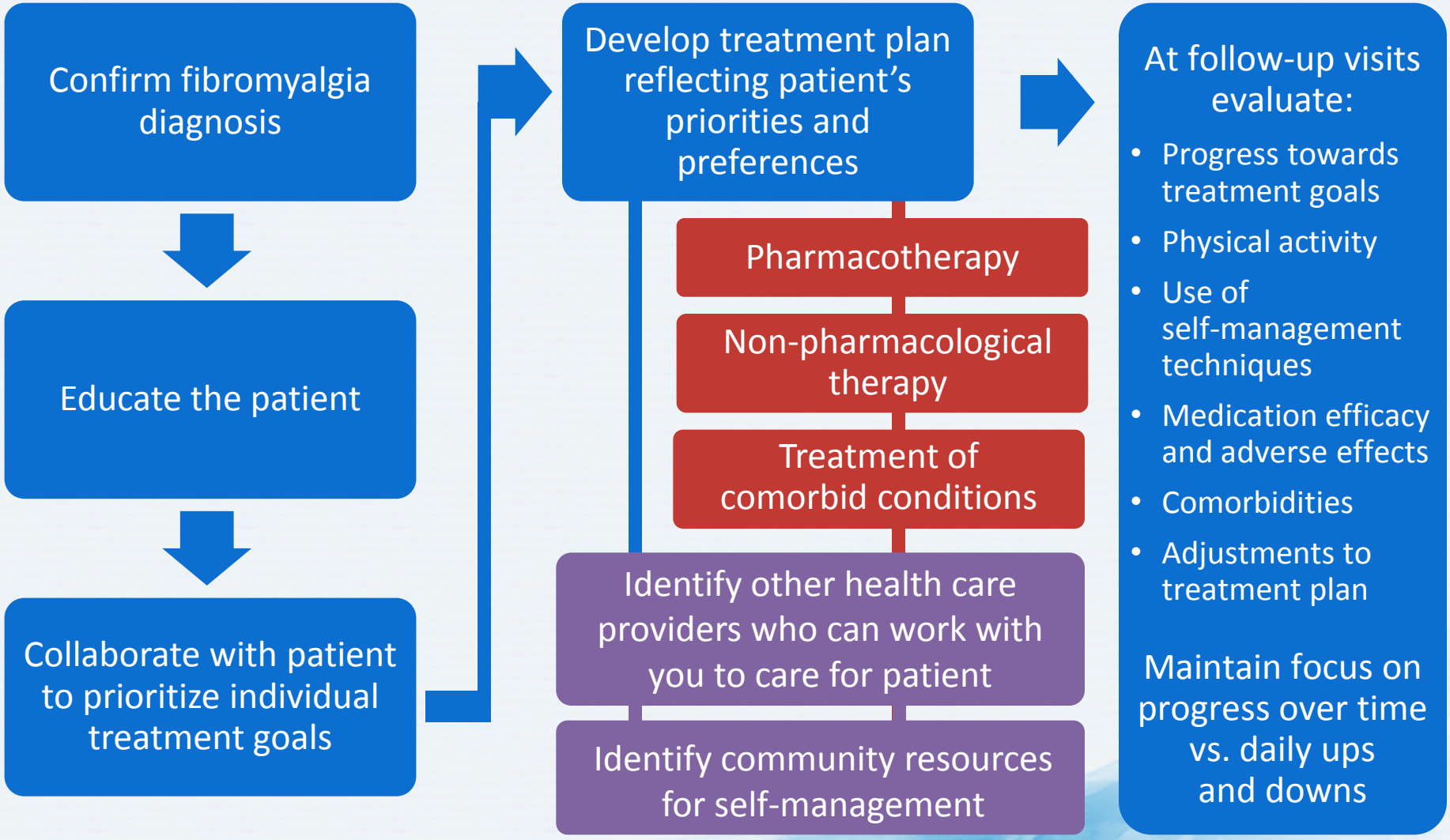
Arnold LM *et al. Arthritis Rheum* 2007; 56(4):1336-44; Carville SF *et al. Ann Rheum Dis* 2008; 67(4):536-41; Clauw DJ, Crofford LJ. *Best Pract Res Clin Rheumatol* 2003; 17(4):685-70; Goldenberg DL *et al. JAMA* 2004; 292(19):2388-95; Mease P. *J Rheumatol* 2005; 32(Suppl 75):6-21.

Core Treatment of Fibromyalgia



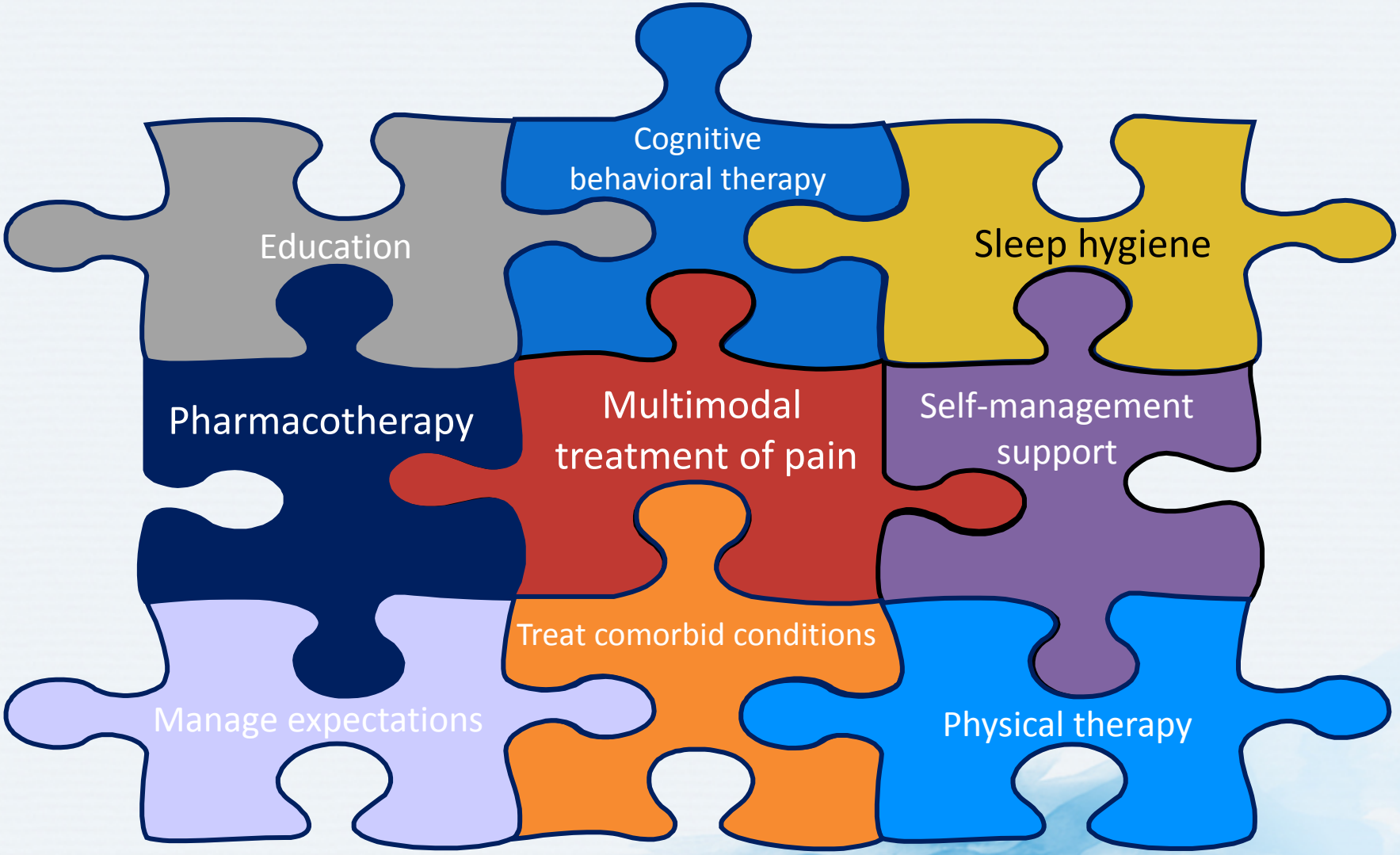
Adapted from: Arnold LM. *Arthritis Res Ther* 2006; 8(4):212; Goldenberg DL *et al. JAMA* 2004; 292(19):2388-95.

Overview of Fibromyalgia Management



Adapted from: Arnold LM *et al. Mayo Clin Proc* 2012; 87(5):488-96.

Multimodal Treatment of Fibromyalgia Based on Biopsychosocial Approach



Arnold LM *et al. Mayo Clin Proc* 2012; 87(5):488-96.

Fibromyalgia: Medication Is Just One Part of the Treatment Approach

NOT shown to be effective or recommended:

- Opioids
- Benzodiazepines
- NSAIDs
- Magnesium
- Vitamin B1
- Hormonal agents (thyroxine, DHEA, melatonin, calcitonin)

Pharmacological treatment

3 medications approved by the FDA:

- Pregabalin
- Duloxetine
- Milnacipran

Non-pharmacological treatment

- Aerobic exercise
- Cognitive behavioral therapy
- Strength training
- Acupuncture
- Hypnotherapy
- Biofeedback
- Balneotherapy
- Massage therapy
- Behavioral therapies, such as relaxation
- Transcranial magnetic stimulation?

DHEA = dehydroepiandrosterone; FDA = Food and Drug Administration; NSAID = non-steroidal anti-inflammatory drug

Häuser W et *al. Arthritis Res Ther* 2014; 16(1):201; Fitzcharles MA *et al. Evid Based Complement Alternat Med* 2013; 2013:528952; Sumpton JE, Moulin DE. *Handb Clin Neurol* 2014; 119:513-27.

Non-pharmacological Treatment

Non-pharmacological Treatment of Fibromyalgia

Sleep hygiene

Physical activity

Cognitive behavioral therapy

Self-management support

Seek support from other health care professionals – nurses, social workers, occupational therapists, physiotherapists, psychologists, psychiatrists, etc.

Arnold LM *et al. Mayo Clin Proc* 2012; 87(5):488-96.

Alternative Medicine/Chiropractic Treatments for Fibromyalgia

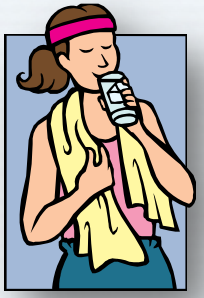
- Strong evidence supports aerobic exercise and cognitive behavioral therapy
- Moderate evidence supports massage, muscle strength training, acupuncture and spa therapy (balneotherapy)
- Limited evidence supports spinal manipulation, movement/body awareness, vitamins, herbs and dietary modification

Schneider M *et al. J Manipulative Physiol Ther* 2009; 32(1):25-40.

Non-pharmacologic Treatments with Demonstrated Efficacy Currently in Use

Cognitive Behavioral Therapy

- Positive effects on coping with and control over pain
  - Not proven to improve pain
- Proven to improve physical function
- Should be done by a trained professional



Aerobic and Strengthening Exercises

- Reduce pain, increase self-efficacy, improve quality of life and reduce depression
- Low-to-moderate intensity, 2–5 times/week

Patient Education

- Conflicting evidence but some studies have shown improvements in pain, sleep, fatigue and quality of life

Brosseau L *et al. Phys Ther* 2008; 88(7):857-71; Brosseau L *et al. Phys Ther* 2008; 88(7):873-86; Goldenberg DL *et al. JAMA 2004*; 292(19):2388-95..

Non-pharmacologic Interventions to Improve Sleep in Fibromyalgia

1. Avoid stimulants
2. Go to bed and rise at regular times
3. Avoid napping through day
4. Exercise regularly, particularly in the afternoon
5. Use the bed only for sleep and sex
6. Relax before bed
7. Printed information on sleep for patients

University of Maryland Medical Center. *Sleep Hygiene*. Available at: http://umm.edu/programs/sleep/patients/sleep-hygiene. Accessed: August 21, 2013.

What is helpful for fatigue?

- Improvement of sleep hygiene
- Avoid napping through the day
- Moderate physical activity
- Pacing
- Realistic goal setting
- Healthy eating
- Avoid stimulants
- Cognitive behavioral therapy
- Some medications may improve fatigue

Lera S *et al. J Psychosom Res* 2009; 67(5):433-41; Rossy LA *et al. Ann Behav Med* 1999; 21(2):180-91; Williams DA. *Best Pract Res Clin Rheumatol* 2003; 17(4):649-65.

Physical Activity and Fibromyalgia

Benefits

- Stimulates release of endorphins and enkephalins within 30 minutes
- These bind to opioid receptors, reducing pain by an action on both ascending and descending neural pathways

Recommendations for Fibromyalgia

Type of Exercise

- Try to include different types in one session (*e.g.*, aerobic, strengthening, stretching)
- Patient preference and availability should guide selection

Intensity

- Start low, go slow
- Gradually increase to reach moderate intensity level

Busch AJ *et al. Curr Pain Headache Rep* 2011; 15(5):358-67; McGovern MK. *The Effects of Exercise on the Brain.* Available at: http://serendip.brynmawr.edu/bb/neuro/neuro05/web2/mmcgovern.html. Accessed: July 25, 2013.

Cognitive Behavioral Therapy in Fibromyalgia

Technique

Learn to identify emotions that influence cognitive and affective components of pain (anxiety, helplessness, depression)

Employ active cognitive, problem-solving and distraction/relaxation techniques to modify emotions

Develop active strategies targeting well-being and control

Thieme K, Turk DC. *Reumatismo* 2012; 64(4):275-85.

IASP: Non-pharmacological Treatment of Fibromyalgia

- Exercise
- Cognitive behavioral therapy
- Multimodal treatment programs
- Balneotherapy
- Homeopathy
- Mild infrared hyperthermia
- Acupuncture

IASP = International Association for the Study of Pain

Sommer C. *Pain Clin Updates* 2010; 18(4):1-4.

Non-pharmacological Treatment of Fibromyalgia: APS Guidelines

1st line

- Cardiovascular exercise
- Cognitive behavioral therapy
- Patient education
- Multidisciplinary therapy

2nd line

- Strength training
- Acupuncture
- Hypnotherapy
- Biofeedback
- Balneotherapy

3rd line

- Chiropractic, manual and massage therapy
- Electrotherapy
- Ultrasound

APS = American Pain Society

Goldenberg D et al. JAMA 2004; 292(19):2388-95.

Non-pharmacological Treatment of Fibromyalgia: Canadian Guidelines

- **Self-management strategies** with active patient participation and **interventions that improve self-efficacy** should be an integral component of the therapeutic plan for the management of fibromyalgia
- Persons with fibromyalgia should participate in a **graduated exercise program** of their choosing
- **Cognitive behavioral therapy** even for a short time is useful and can help reduce fear of pain and fear of activity
- There is currently insufficient evidence to support the recommendation of complementary and alternative medicine treatments for the management of fibromyalgia

Fitzcharles MA *et al. Pain Res Manag* 2013; 18(3):119-26.

Non-pharmacological Treatment of Fibromyalgia: Brazilian Consensus

Recommended	Not Recommended
• Cognitive behavioral therapy • Exercise • Musculoskeletal exercises ≥2x/week • Individualized aerobic exercise programs • Individualized stretching programs • Muscular strengthening programs • Physical therapy • Psychotherapeutic support • Rehabilitation • Relaxation	• Biofeedback • Chiropractic manipulation • Hypnotherapy • Homeopathic treatment • Therapeutic massage • Global postural reeducation • Pilates

Heymann RE *et al. Rev Bras Reumatol* 2010; 50(1):56-66.

Non-pharmacological Treatment of Fibromyalgia: EULAR Guidelines

2nd line

- Heated pool treatment, with or without exercise

3rd line

- Individually tailored exercise programs, with aerobic exercise and strength training
- Physiotherapy
- Psychological support
- Rehabilitation
- Relaxation

4th line

- Cognitive behavioral therapy

EULAR = European League Against Rheumatism

Carville SF *et al. Ann Rheum Dis* 2008; 67(4):536-41

Non-pharmacological Treatment of Fibromyalgia: AMWF Guidelines

Recommended

- Acupuncture
- Biofeedback
- Cognitive behavioral therapy
- Functional training
- Meditative movement therapies
- Multicomponent therapy
- Patient and psychological education
- Strength training

Not Recommended

- Chiropractic
- Cold therapy
- Homeopathy
- Laser
- Magnetic field therapy
- Massage
- Mindfulness-based stress reduction as sole treatment
- Reiki
- Therapeutic writing
- Transcranial direct current stimulation

No Positive or Negative Recommendation

- Elimination diet, vegetarian diet or therapeutic fasting
- Exercise therapy
- Foot reflexology massage therapy
- Full body heat treatment
- Lymphatic drainage
- Osteopathy
- Physiotherapy
- Ultrasound/electrotherapy

AMWF = Association of the Scientific Medical Societies in Germany

Arnold B *et al. Schmerz* 2012; 26(3):287-90; Eich W *et al. Schmerz* 2012; 26(3):268-75; Köllner V *et al. Schmerz* 2012; 26(3):291-6; Langhorst J *et al. Schmerz* 2012; 26(3):311-7; Winkelmann A *et al. Schmerz* 2012; 26(3):276-86.

Non-pharmacological Treatment of Fibromyalgia: Hong Kong MPNP Recommendations

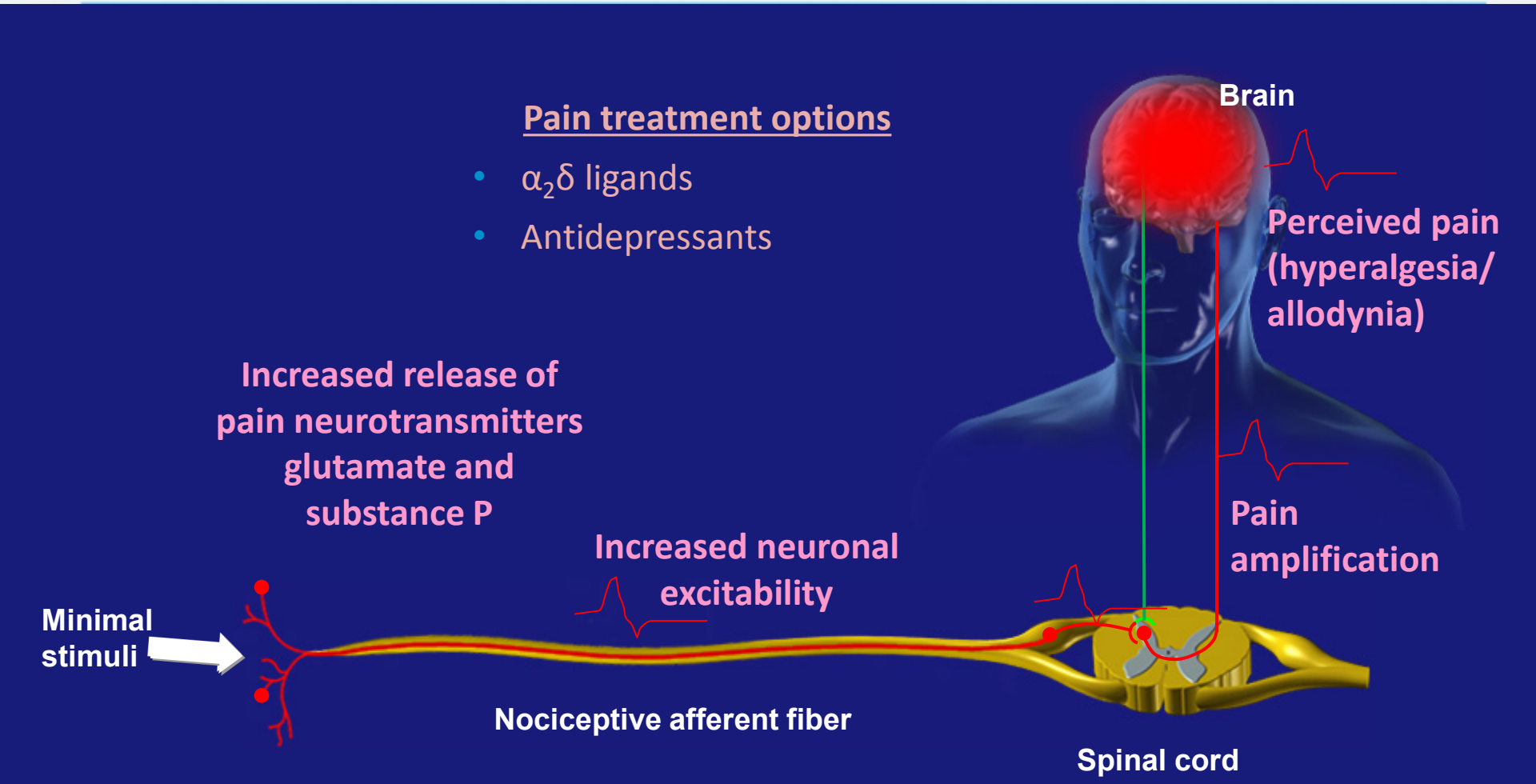
- Cognitive behavioral therapy
- Lifestyle changes:
  - Balanced diet
  - Meditation/relaxation techniques
  - Sleep hygiene
- Physical therapy:
  - Exercise (aerobic exercise, strength training)
  - Hydrotherapy or aquatherapy
  - Occupational/physiotherapy
- Trigger point injection

MPNP = Multidisciplinary Panel on Neuropathic Pain

The Multidisciplinary Panel on Neuropathic Pain. *Recommendations for the Management of Fibromyalgia*. Available at: http://www.mims.com/Hongkong/pub/topic/Medical%20Progress/2011-01/Recommendations%20for%20the%20Management%20of%20Fibromyalgia. Accessed: August 30, 2013.

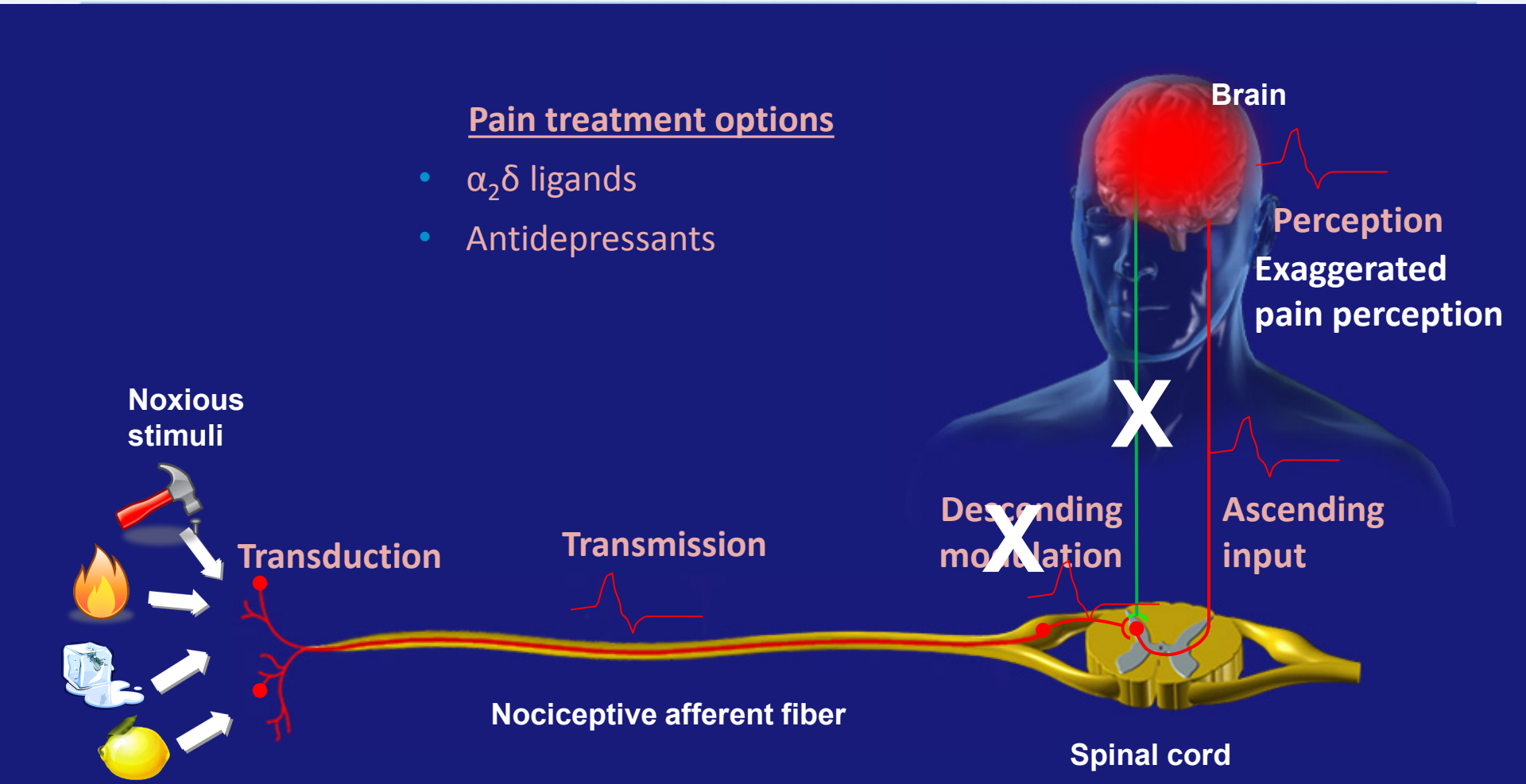
Pharmacological Treatment

Central Sensitization Produces Abnormal Pain Signaling



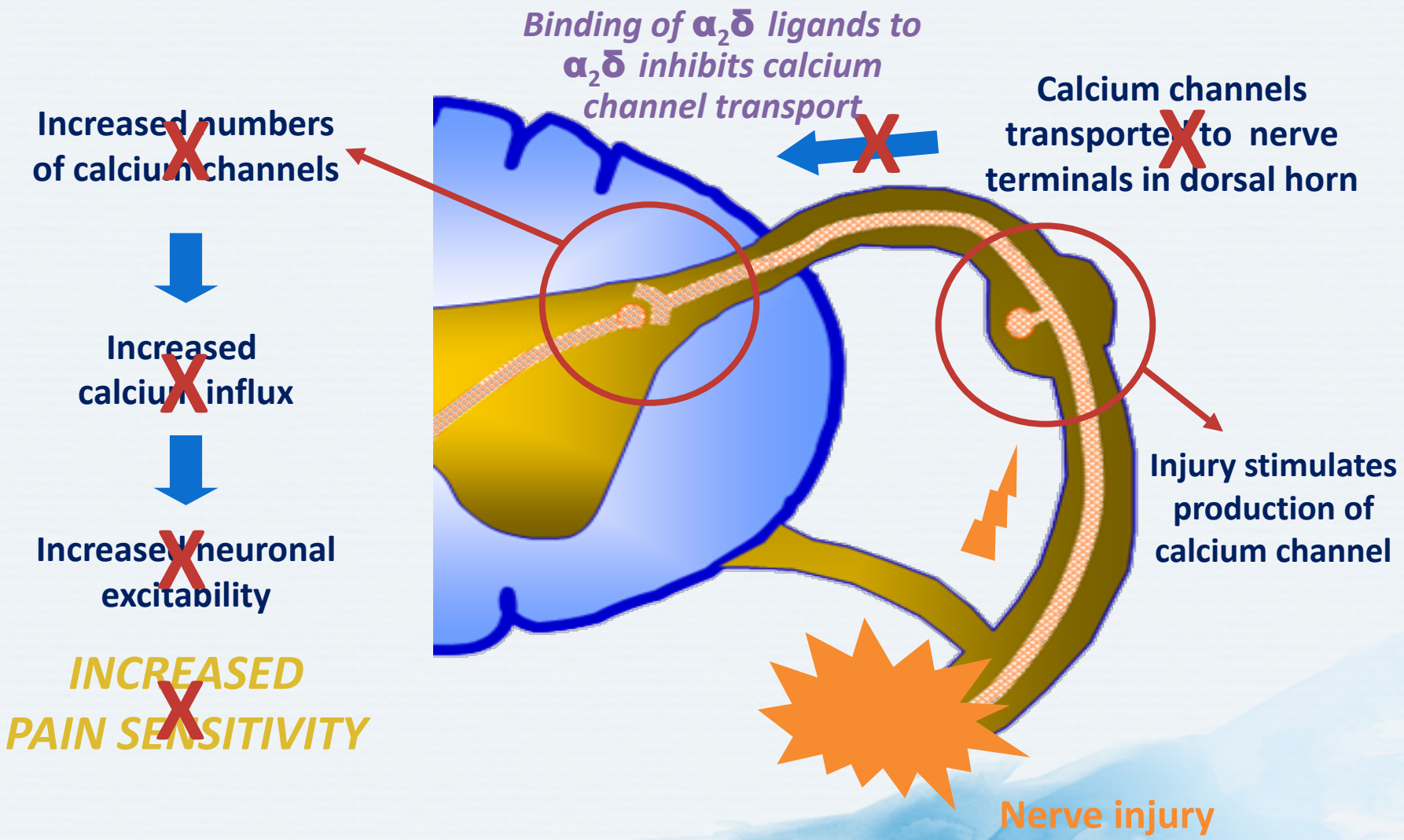
Adapted from: Campbell JN, Meyer RA. *Neuron* 2006; 52(1):77-92; Gottschalk A, Smith DS. *Am Fam Physician* 2001; 63(10)1979-86; Henriksson KG. *J Rehabil Med* 2003; 41(Suppl):89-94; Larson AA *et al. Pain* 2000; 87(2):201-11; Marchand S. *Rheum Dis Clin North Am* 2008; 34(2):285-309; Rao SG. *Rheum Dis Clin North Am* 2002; 28(2):235-59; Staud R. *Arthritis Res Ther* 2006; 8(3):208-14; Staud R, Rodriguez ME. *Nat Clin Pract Rheumatol* 2006; 2(2):90-8; Vaerøy H *et al. Pain* 1988; 32(1):21-6; Woolf CJ *et al. Ann Intern Med* 2004; 140(6):441-51.

Loss of Inhibitory Control: Disinhibition



Attal N, Bouhassira D. *Acta Neurol Scand* 1999; 173:12-24; Doubell TP *et al.* In: Wall PD, Melzack R (eds). *Textbook of Pain*. 4th ed. Harcourt Publishers Limited; Edinburgh, UK: 1999; Woolf CJ, Mannion RJ. *Lancet* 1999; 353(9168):1959-64.

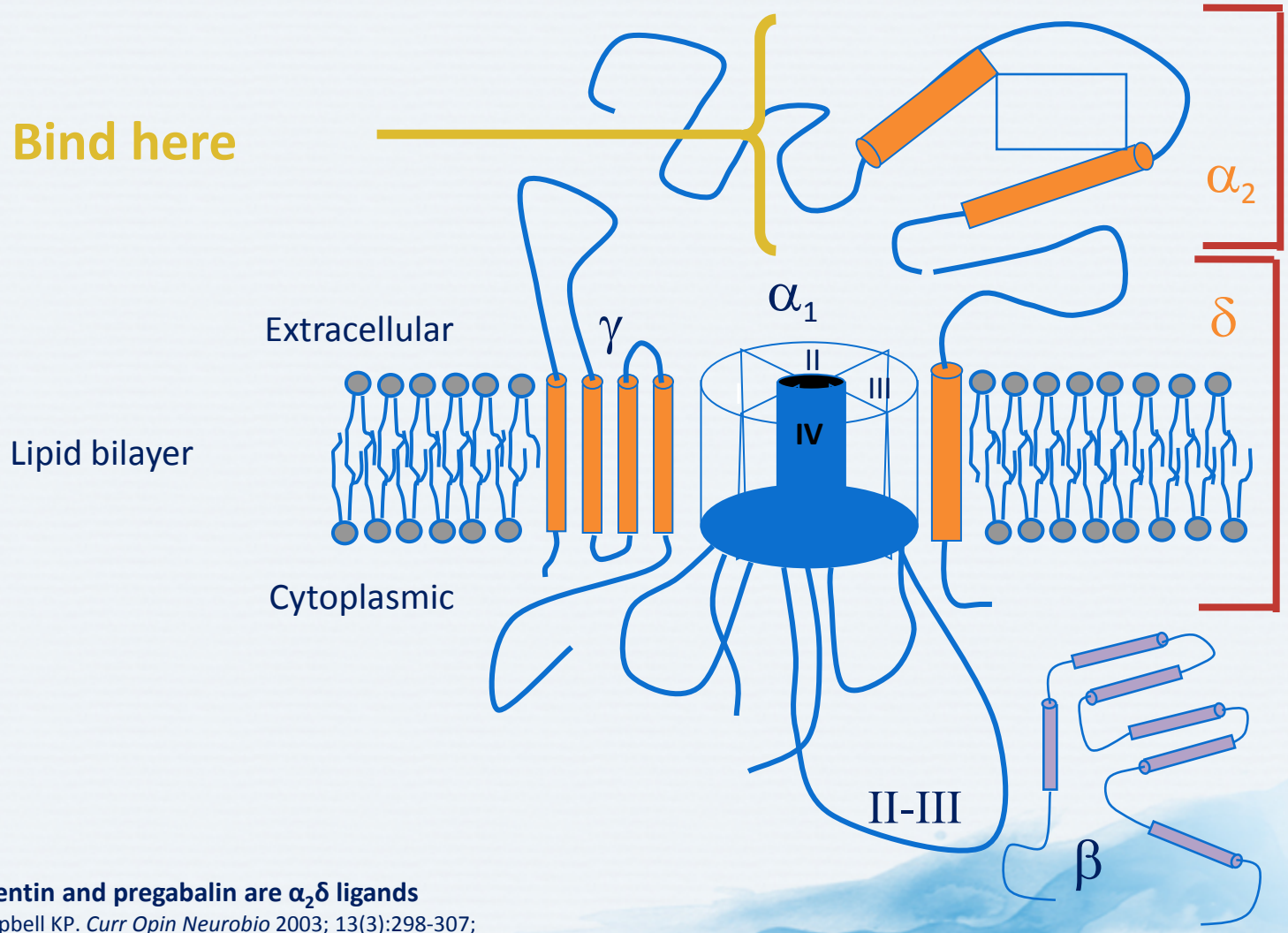
How $\alpha_2\delta$ Ligands Decrease Pain Sensitivity



Note: gabapentin and pregabalin are $\alpha_2\delta$ ligands

Bauer CS *et al. J Neurosci* 2009; 29(13):4076-88.

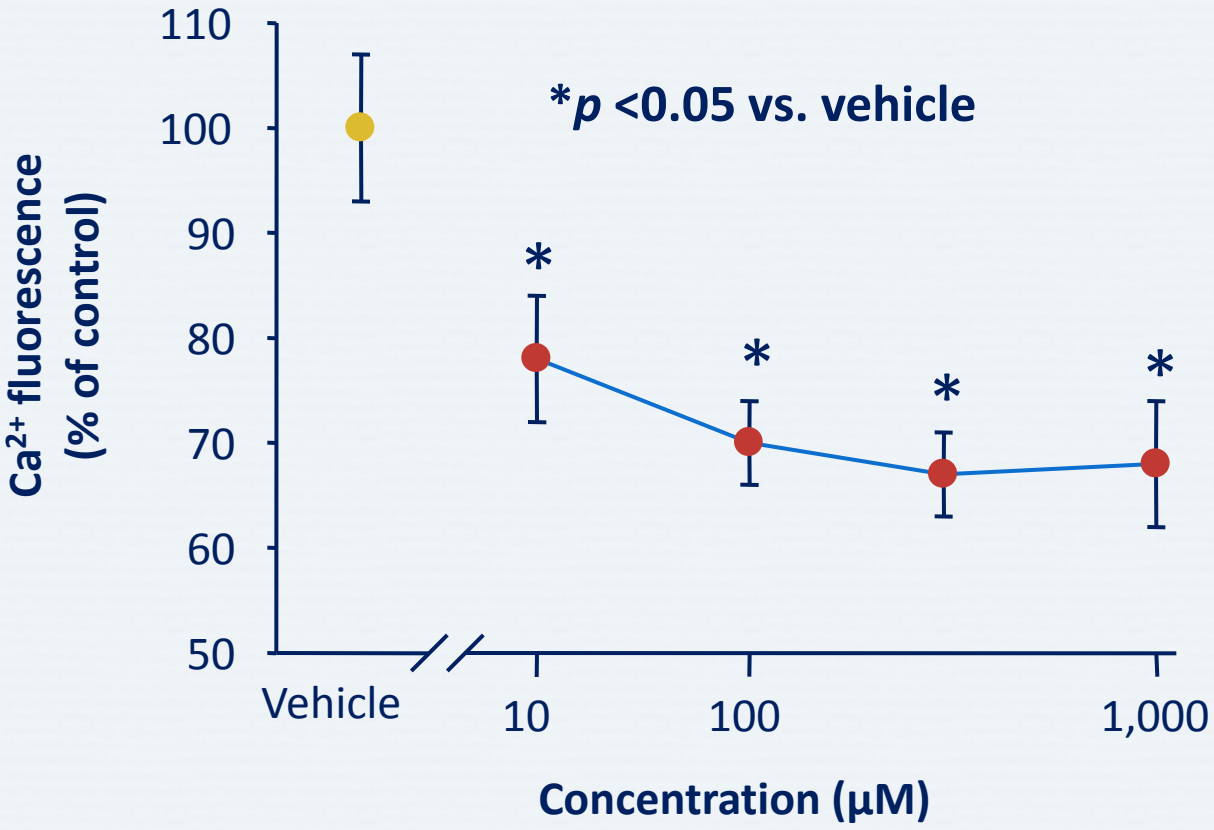
$\alpha_2\delta$ Ligands Bind to $\alpha_2\delta$ Subunit of Voltage-Gated Calcium Channels



Note: gabapentin and pregabalin are $\alpha_2\delta$ ligands

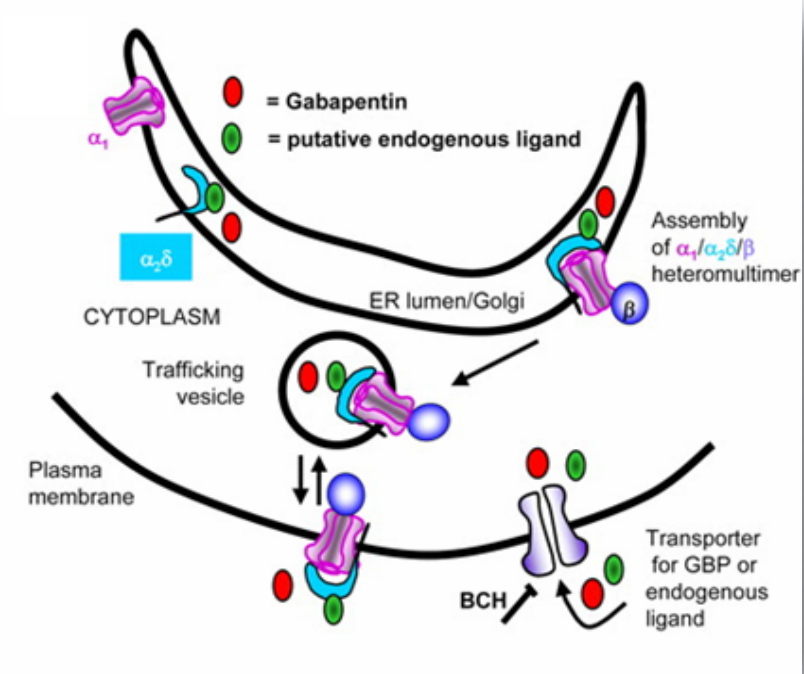
Arikkath J, Campbell KP. *Curr Opin Neurobio* 2003; 13(3):298-307;
Catterall WA. *J Bioenerg Biomembr* 1996; 28(3):219-30; Gee NS *et al. Biol Chem* 1996; 271(10):5768-76..

$\alpha_2\delta$ Ligands Reduce Calcium Influx in Depolarized Human Neocortex Synaptosomes

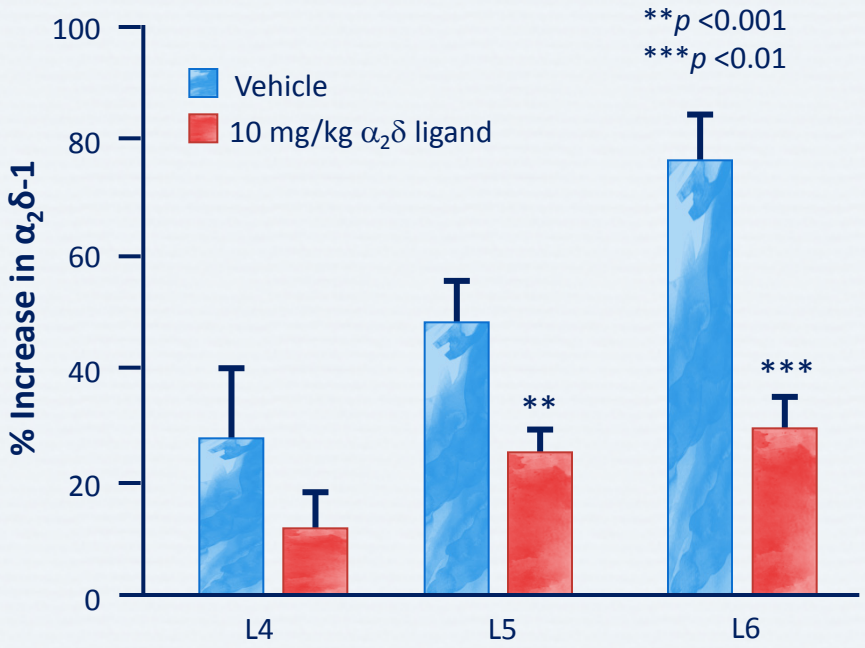


Fink K *et al. Neuropharmacology* 2002; 42(2):229-36.

$\alpha_2\delta$ Ligands Modulate Calcium Channel Trafficking



Hendrich et al. 2008



Bauer et al. 2009

- **$\alpha_2\delta$ ligands reduce trafficking of voltage-gated calcium channel complexes to cell surface *in vitro***
- **$\alpha_2\delta$ ligands prevent nerve-injury induced up-regulation of $\alpha_2\delta$ in the dorsal horn**

BCH = 2-(−)-endoamino-bicycloheptene-2-carboxylic acid; ER = endoplasmic reticulum; GBP = gabapentin

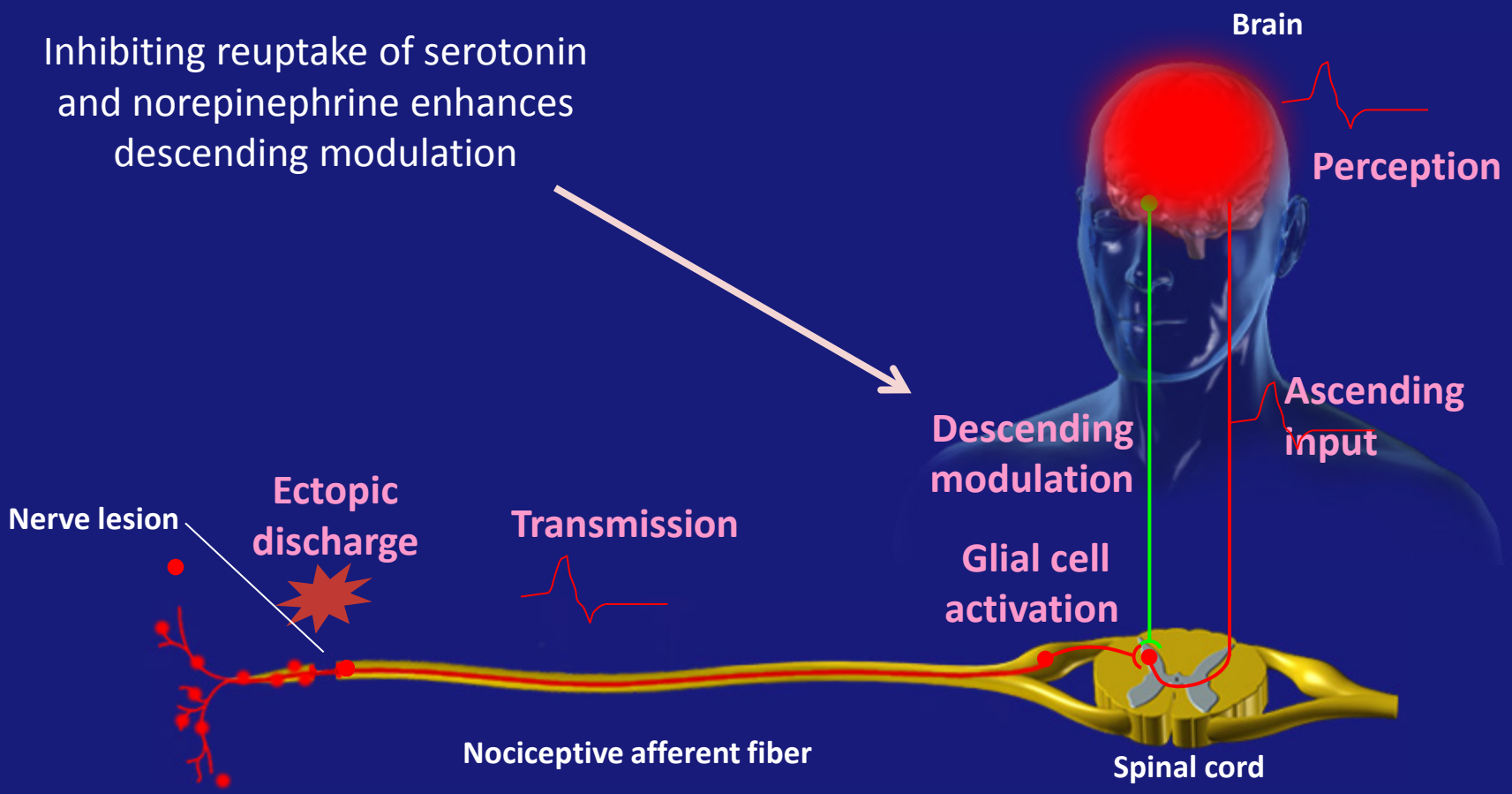
Bauer CS *et al. Neurosci* 2009; 29(13):4076-88; Hendrich J *et al. Proc Natl Acad Sci U S A* 2008; 105(9):3628-33.

Adverse Effects of $\alpha_2\delta$ Ligands

System	Adverse effects
Digestive system	Dry mouth
CNS	Dizziness, somnolence
Other	Asthenia, headache, peripheral edema, weight gain

$\alpha_2\delta$ ligands include gabapentin and pregabalin
CNS = central nervous system
Attal N, Finnerup NB. *Pain Clinical Updates* 2010; 18(9):1-8.

How Antidepressants Modulate Pain



Verdu B *et al. Drugs* 2008; 68(18):2611-2632.

Suggested Mechanisms of Analgesic Action of Antidepressants

Mechanism of Action	Site of Action	TCA	SNRI
Reuptake inhibition	Serotonin Noradrenaline	+ +	+ +
Receptor antagonism	α-adrenergic NMDA	+ +	- (+) milncipran
Blocking or activation of ion channels	Sodium channel blocker Calcium channel blocker Potassium channel activator	+ + +	(+) venlafaxine/ - duloxetine ? ?
Increasing receptor function	$GABA_B$ receptor	+ amitripline/ desipramine	?
Opioid receptor binding/ opioid-mediated effect	Mu- and delta-opioid receptor	(+)	(+) venlafaxine
Decreasing inflammation	Decrease of PGE2 production decrease of TNFα production		

GABA = γ-aminobutyric acid; NDMA = N-methyl-D-aspartate; PGE = prostaglandin E;
SNRI = serotonin-norepinephrine reuptake inhibitor; TCA = tricyclic antidepressant; TNF = tumor necrosis factor

Verdu B *et al. Drugs* 2008; 68(18):2611-32.

Adverse Effects of Antidepressants

System	TCAs	SNRIs
Digestive system	Constipation, dry mouth, urinary retention	Constipation, diarrhea, dry mouth, nausea, reduced appetite
CNS	Cognitive disorders, dizziness, drowsiness, sedation	Dizziness, somnolence
Cardiovascular	Orthostatic hypotension, palpitations	Hypertension
Other	Blurred vision, falls, gait disturbance, sweating	Elevated liver enzymes, elevated plasma glucose, sweating

CNS = central nervous system; TCA = tricyclic antidepressant; SNRI = serotonin-norepinephrine reuptake inhibitor

Attal N, Finnerup NB. Pain Clinical Updates 2010; 18(9):1-8.

IASP: Pharmacological Treatment for Fibromyalgia

Level 1

A

- Amitriptyline
- Duloxetine
- Milnacipran
- Pregabalin

B

- Gabapentin

Level 2

A

- Cyclobenzapine
- Fluoxetine

B

- Paroxetine
- Tramadol

IASP = International Association for the Study of Pain

Sommer C. *Pain Clin Updates* 2010; 18(4):1-4.

Pharmacological Treatment of Fibromyalgia: APS Guidelines

1st line

- TCAs (amitriptyline, cyclobenzaprine)

2nd line

- $\alpha_2\delta$ ligands (pregabalin)
- SNRIs (duloxetine, milnacipran, venlafaxine)
- SSRIs (fluoxetine)
- Weak opioids (tramadol)

3rd line

- 5-hydroxytryptamine
- Growth hormone
- Tropisetron
- S-adenosyl-methionine

APS = American Pain Society; SNRI = serotonin norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant

Goldenberg D *et al. JAMA* 2004; 292(19):2388-95.

Pharmacological Treatment of Fibromyalgia: Canadian Guidelines

1st line

- $\alpha_2\delta$ ligands (e.g., pregabalin)
- TCAs (e.g., amitriptyline)
- SNRIs (e.g., duloxetine)
- SSRIs (e.g., paroxetine)

2nd line

- Weak opioids (e.g., tramadol) should be reserved for patients with moderate to severe pain that is unresponsive to other treatment modalities

3rd line

- Cannabinoids (e.g., nabilone) may be considered, particularly in the setting of important sleep disturbance

SNRI = serotonin norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant

Fitzcharles MA *et al. Pain Res Manag* 2013; 18(3):119-26.

Pharmacological Treatment of Fibromyalgia: Brazilian Consensus

Recommended	Not Recommended
• $\alpha_2\delta$ ligands: gabapentin, pregabalin • Anti-Parkinson medication: pramipexole • MAOI antidepressants: moclobemide • Non-benzodiazepine hypnotics: zopiclone, zolpidem • SNRIs: duloxetine, milnacipran • SSRIs: fluoxetine • TCAs: amitriptyline, cyclobenzaprine, nortriptyline • Tropisetron • Weak opioids: tramadol	• Benzodiazepines: clonazepam, alprazolam • Corticosteroids • nsNSAIDs/coxibs • SSRIs: citalopram, escitalopram, paroxetine, sertraline • Strong opioids • TCAs: clomipramine, imipramine • Tinazidine • Topiramate

Coxib = COX-2-selective inhibitor; MAOI = monoamine oxidase inhibitor; nsNSAID = non-selective non-steroidal anti-inflammatory drug; SNRI = serotonin norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant

Heymann RE *et al. Rev Bras Reumatol* 2010; 50(1):56-66.

Pharmacological Treatment of Fibromyalgia: EULAR Guidelines

Recommended

- $\alpha_2\delta$ ligands (pregabalin)
- Antidepressants (amitriptyline, fluoxetine, duloxetine, milnacipran, moclobemide, pirlindole)
- Pramipexole
- Tramadol
- Tropisetron

Not recommended

- Corticosteroids
- Strong opioids

May be considered

- Simple analgesics (acetaminophen)
- Other weak opioids

EULAR = European League Against Rheumatism

Carville SF *et al. Ann Rheum Dis* 2008; 67(4):536-41.

Pharmacological Treatment of Fibromyalgia: AMWF Guidelines

Recommended

- Amitriptyline
- Duloxetine, with comorbid depression or anxiety
- Pregabalin
- SSRIs (fluoxetine, paroxetine), with comorbid depression

Not Recommended

- Anxiolytics
- Cannabinoids
- Dopamine agonists
- Flupirtine
- Hormones
- Hypnotics
- Ketamine
- Local anesthetics
- Milnacipran
- MAOIs
- Sodium oxybate
- Neuroleptics
- Non-steroidal antirheumatics
- Muscle relaxants
- Strong opioids
- Tropesitron
- Virostatics

No Positive or Negative Recommendation

- Acetaminophen
- Metamizole
- Weak opioids

AMWF = Association of the Scientific Medical Societies in Germany;
MAOI = monoamine oxidase inhibitor; SSRI = selective serotonin reuptake inhibitor

Sommer C *et al. Schmerz* 2012; 26(3):297-310.

Pharmacological Treatment of Fibromyalgia: Hong Kong MPNP Recommendations

- α2δ ligands (gabapentin, pregabalin)
- SNRIs (duloxetine, milnacipran)
- TCAs (amitriptyline, cyclobenzaprine)
- Tramadol

MPNP = Multidisciplinary Panel on Neuropathic Pain;
SNRI = serotonin norepinephrine reuptake inhibitor; TCA = tricyclic antidepressant

The Multidisciplinary Panel on Neuropathic Pain. *Recommendations for the Management of Fibromyalgia*. Available at: http://www.mims.com/Hongkong/pub/topic/Medical%20Progress/2011-01/Recommendations%20for%20the%20Management%20of%20Fibromyalgia. Accessed: August 30, 2013.

Non-adherence to Medication in Fibromyalgia

Non-adherence to medication	n (%)*
Did you forget to take your medication?	31 (24.4)
Were you careless at times about taking your medication?	26 (20.5)
When you felt better, did you sometimes stop taking your medication?	25 (19.7)
If you felt worse when you took your medication, did you sometimes stop taking your medication?	25 (19.7)
Endorsement of at least one item	**60 (47.2)**

***127 women were surveyed**

Sewitch MJ *et al. Rheumatology (Oxford)* 2004; 43(5):648-54.

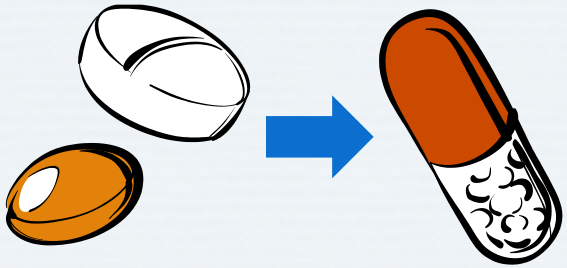
Strategies to Improve Adherence

- **S**implify regimen
- **I**mpart knowledge
- **M**odify patient beliefs and human behavior
- **P**rovide communication and trust
- **L**eave the bias
- **E**valuate adherence

Atreja A *et al*. *Medacapt Gen Med* 2005; 7(1):4.

Simplifying Medication Regimen

- If possible, adjust regimen to minimize:
  - Number of pills taken
  - Number of doses per day
  - Special requirements (e.g, bedtime dosing, avoiding taking medication with food, etc.)



- Recommend all medications be taken at the same time of day (if possible)
- Link taking medication to daily activities, such as brushing teeth or eating
- Encourage use of adherence aids such as medication organizers and alarms

American College of Preventive Medicine. *Medication Adherence Clinical Reference.* Available at: http://www.acpm.org/?MedAdherTT_ClinRef. Accessed: October 8, 2013; van Dulmen S *et al. BMC Health Serv Res* 2008; 8:47.

Imparting Knowledge

- Provide clear, concise instructions (written and verbal) for each prescription
- Be sure to provide information at a level the patient can understand
- Involve family members if possible
- Provide handouts and/or reliable websites for patients to access information on their condition
- Provide concrete advice on how to cope with medication costs

American College of Preventive Medicine. *Medication Adherence Clinical Reference.* Available at: http://www.acpm.org/?MedAdherTT_ClinRef. Accessed: October 8, 2013.

Modifying Patient Beliefs and Behaviors: Motivational Interviewing Technique

Techniques	Examples
• Express empathy	• "It's normal to worry about medication side effects"
• Develop discrepancy	• "You obviously care about your health; how do you think not taking your pills is affecting it?"
• Roll with resistance	• "I understand that you have a lot of other things besides taking pills to worry about"
• Support self efficacy	• "It sounds like you have made impressive efforts to work your new medication into your daily routine"

Bisono A *et al.* In: O'Donoghue WT, Levensky ER (eds). *Promoting Treatment Adherence: A Practical Handbook for Health Care Providers.* SAGE Publications, Inc.; London, UK: 2006.

Providing Communication and Trust: Communication Tips

- Be an active listener
  - Focus on the patient
  - Nod and smile to show you understand
- Make eye contact

- Be aware of your own body language
  - Face the patient
  - Keep arms uncrossed
  - Remove hands from pockets
- Recognize and interpret non-verbal cues

McDonough RP, Bennett MS. *Am J Pharm Educ* 2006; 70(3):58;
Srnka QM, Ryan MR. *Am Pharm* 1993; NS33(9):43-6.

Leaving the Bias

Acknowledge biases

Learn more about how low health literacy can affect patient outcomes

Specifically ask about attitudes, beliefs and cultural norms with regards to medication

Tailor communication to patient's beliefs and level of understanding

American College of Preventive Medicine. *Medication Adherence Clinical Reference.* Available at: http://www.acpm.org/?MedAdherTT_ClinRef. Accessed: October 8, 2013.

Evaluating Adherence: 4-Step Strategy for Detecting Non-adherence

1. Ask an open-ended question about taking medicine
2. Normalize and universalize non-adherence to reverse the judgmental environment
3. Make the role of accurate information about adherence in medical decision-making explicit
4. Don’t ask about “forgetting” or “missed” doses until the first 3 steps have set the stage

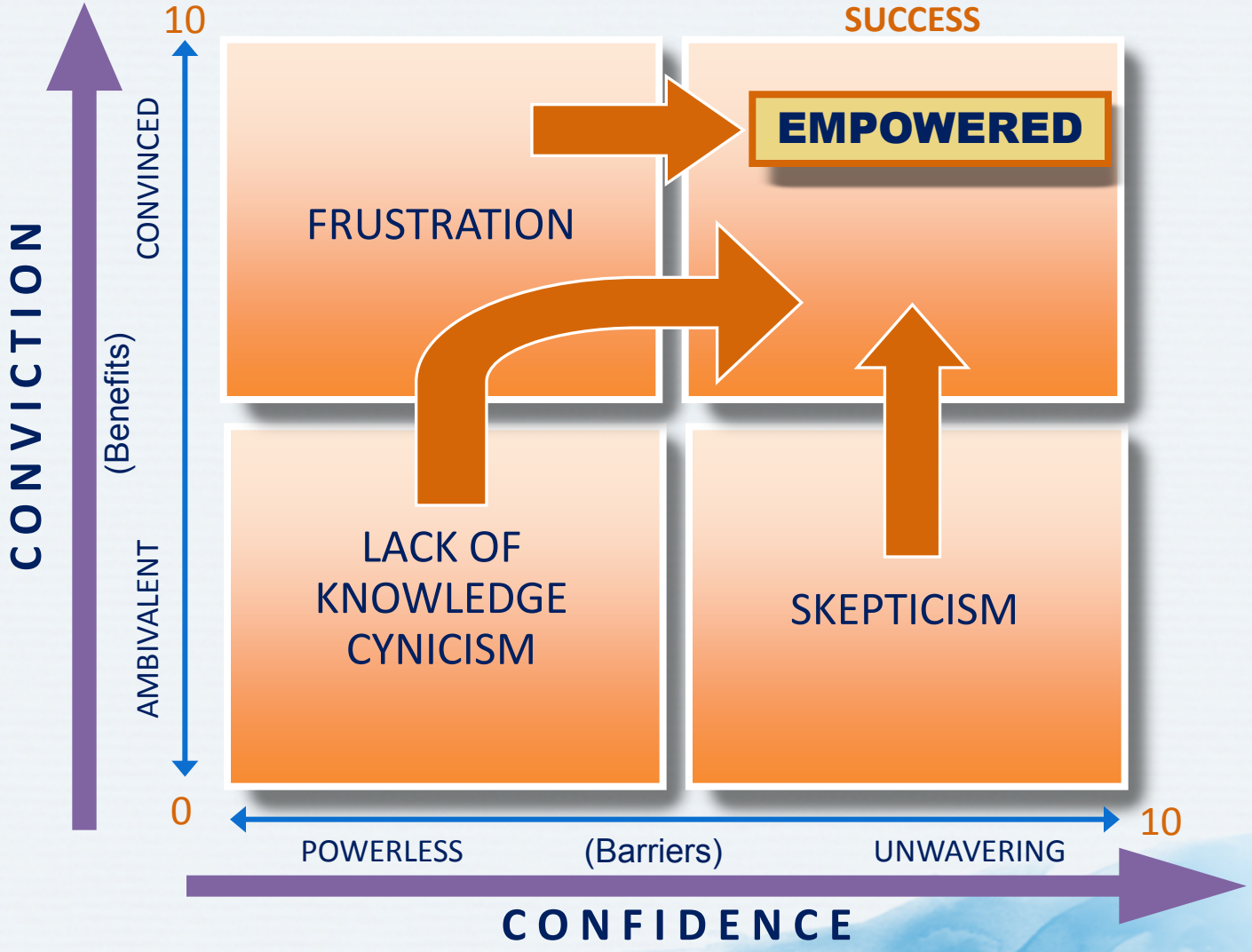
Hahn S, Budenz DL. *Adv Stud Ophthalmol* 2008; 5(2):44-9.

Conviction and Confidence: A Model for Successful Interventions

- Patient conviction (i.e., sense of the patient's personal, emotional recognition of the benefits of changing a behavior)
  - *"Is increasing your physical activity a priority for you?"*
  - Increase conviction by getting patients to articulate benefits of change
- Patient confidence (i.e., sense of the patient's ability to modify a behavior)
  - *"If you did decide to become physically active, how confident are you that you would be able to follow though?"*
  - Increase confidence by identifying barriers to change and helping patients overcome those barriers by identifying their own solutions

Keller VF, White KM. J Clin Outcomes Manage.1997; 4(6):33-6;
Miller WR, Rollnick S. *Motivational Interviewing: Preparing People to Change Addictive Behavior.* Guilford Press; New York, NY: 1991.

Conviction – Confidence Model



Adapted from: Keller VF, White KM. J Clin Outcomes Manage.1997; 4(6):33-6;
Miller WR, Rollnick S. *Motivational Interviewing: Preparing People to Change Addictive Behavior.* Guilford Press; New York, NY: 1991.

Summary

Management: Summary

- Set realistic treatment goals and manage patient expectations
- Incorporate both **pharmacological** and **non-pharmacological** strategies
- Use non-pharmacological treatments **first**
- Use medical therapies that target pain and have evidence for efficacy in fibromyalgia as first-line pharmacotherapy
  - Balance medication side effects and risk with optimizing function
  - Chose medications that target the **most troublesome symptoms**
  - Start low, go slow – reassure patients