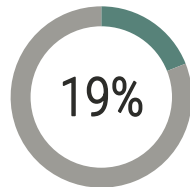
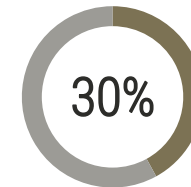
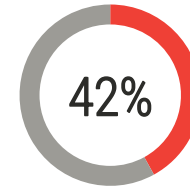


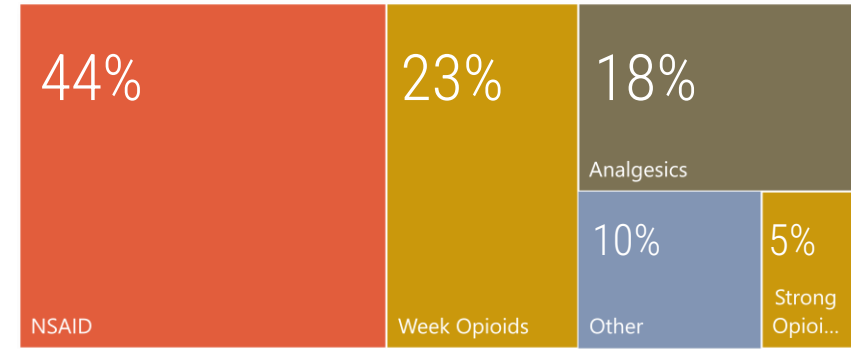


**1 out of 5 Europeans**  
suffers from chronic pain

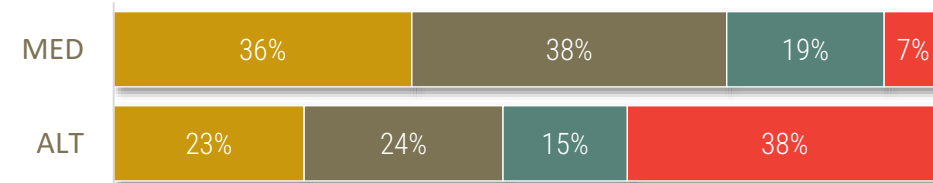
**+ 100 MIL. PATIENTS**  
suffer from chronic pain



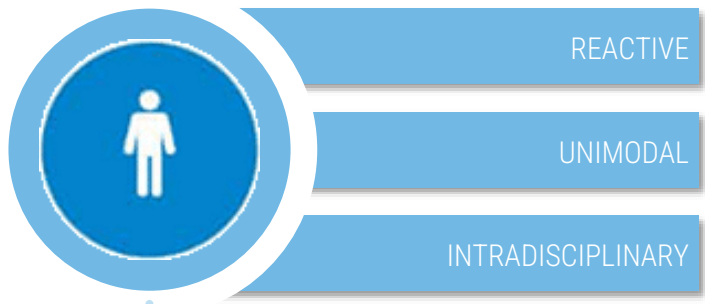
MEDICATIONS FOR CHRONIC PAIN MANAGEMENT



■ NET Good ■ NET Poor ■ Average ■ NO Experience

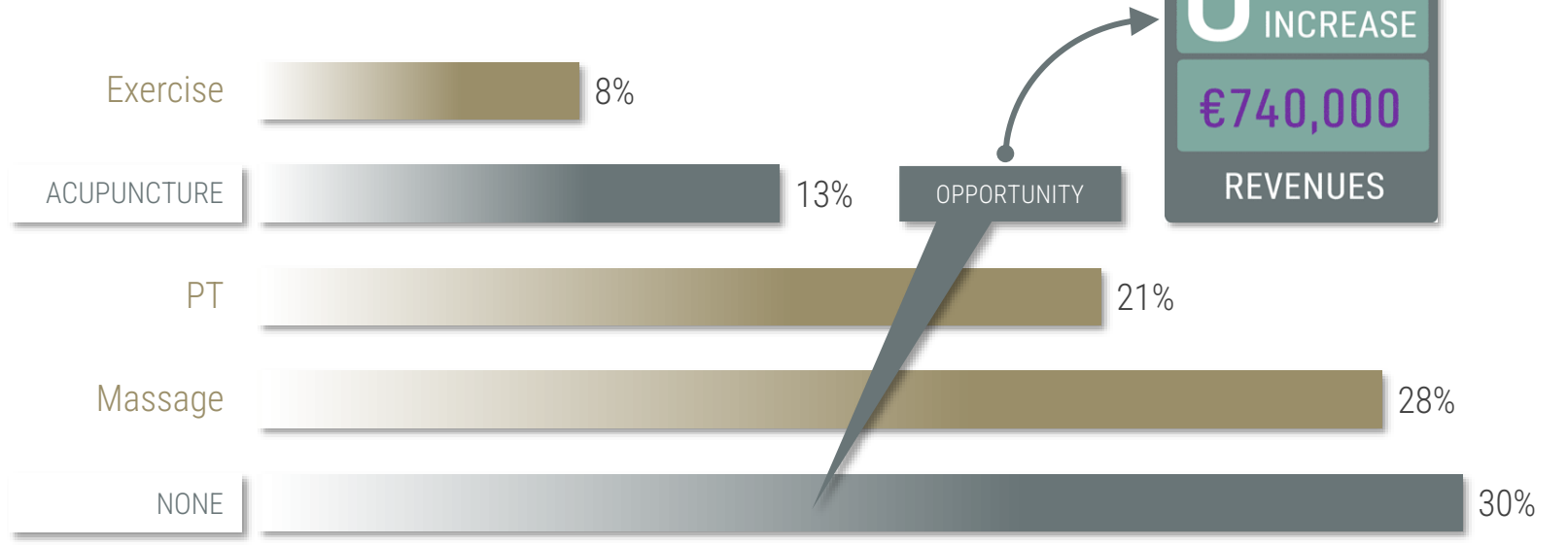


**1.50 billion**  
adults have **chronic pain**  
daily or almost daily

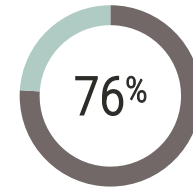
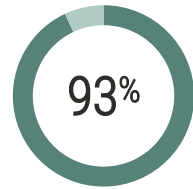


### Alternative pain management choices %

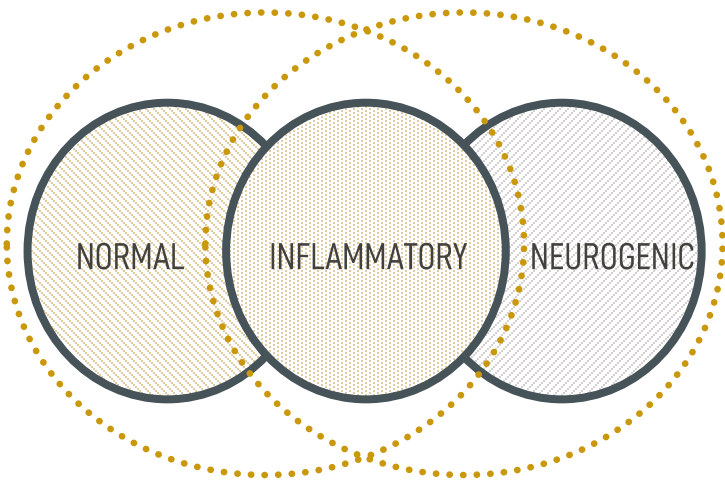
<sup>1</sup>Survey-of-chronic-pain-in-Europe results from 46,394 respondents



of 89,000 patients reported successful treatment for musculoskeletal pain with acupuncture (ASH 2016) <sup>3</sup>



of 454920 Patients treated for chronic pain by 8727 physicians reported marked or moderate improvements.<sup>2</sup>



### NOCICEPTIVE

Post-operative  
Injury (sport/exercise)  
Mechanical pain  
Arthritic

Physiological activation  
Neural transduction  
Local and referred pain  
Ordinary hyperalgesia

Aching, throbbing  
Well localized  
Self resolving  
Tx – NSAID, RICE  
Manual therapy

Good response to meds

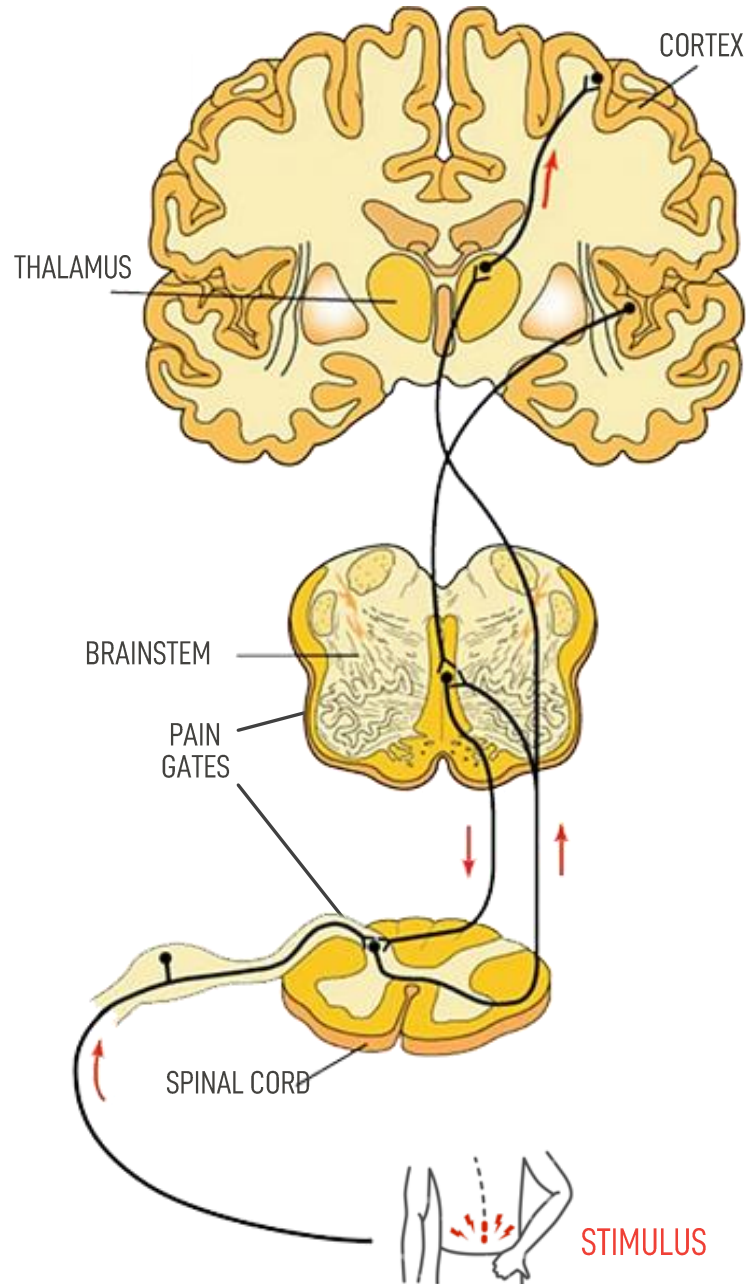
### PATHOLOGIC

Postherpetic  
Distal polyneuropathy  
Post stroke  
Neuralgias

Lesion in PNS/CNS  
Somatosensory nerve  
Ectopic impulse  
Unusual sensations

Tingling, Shock, numb  
Generalized  
Chronic  
Tx – Opioids, Antidep. MEAT  
TENS Acupuncture

Poor response to meds



### 4 PERCEPTION

Brain Interprets the  
Signal and Produces  
"Pain"

### 3 MODULATION

Altering or Blocking the  
Pain Signal as It Travels  
Through Spinal Cord,  
Medulla, Pons, and  
Midbrain to the Cerebral  
Cortex

### 2 TRANSMISSION

Propagation of the  
Electrical Signal From  
Nerves to the Brain.

### 1 TRANSDUCTION

Mechanical Stimulus in  
Tissues Becomes an  
Electrical Signal in Nerves.

### MEDICATIONS



#### ANALGESICS

NSAIDS - GLUCOCORTICOIDS  
ACETAMINOPHEN

#### OPIOIDS

MORPHINE - FENTANYL  
ENKEFALINS

#### LOCAL ANESTHETICS

LIDOCAINE, MEPIVACAINE  
PRILOCAINE

#### OTHER

ANTIDEPRESSANTS, KETAMINE  
A-2 AGONISTS, MAGNESIUM  
GABAPENTIN, CAPSAICIN

### MODALITIES

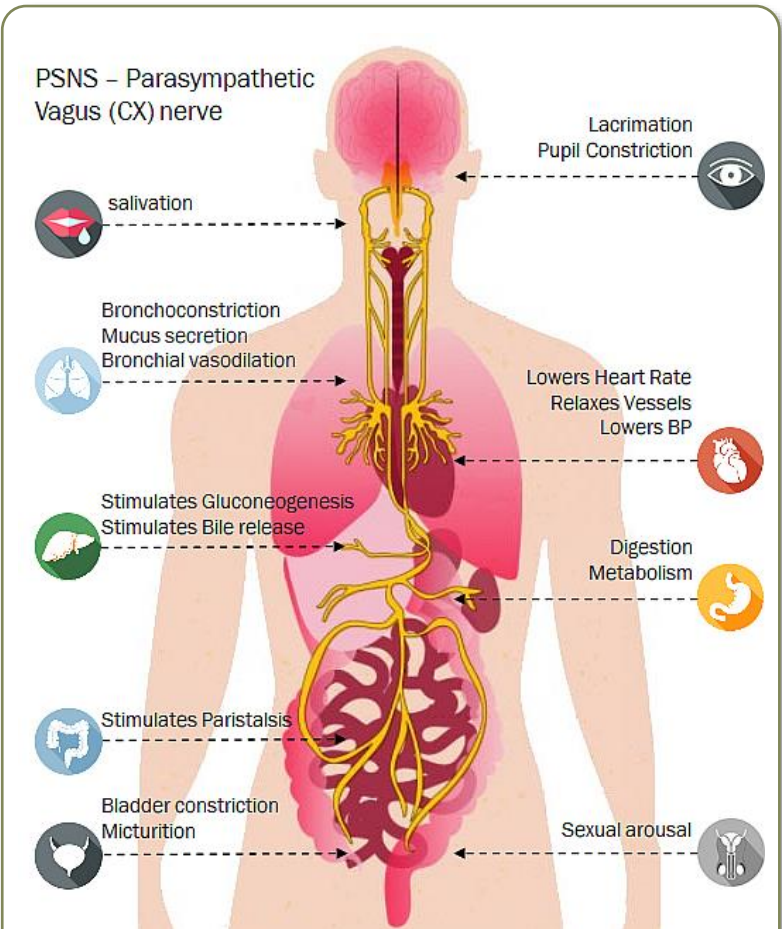


#### ACUTE PAIN - RICE

Rest Ice Compress Elevate  
Symptom modalities

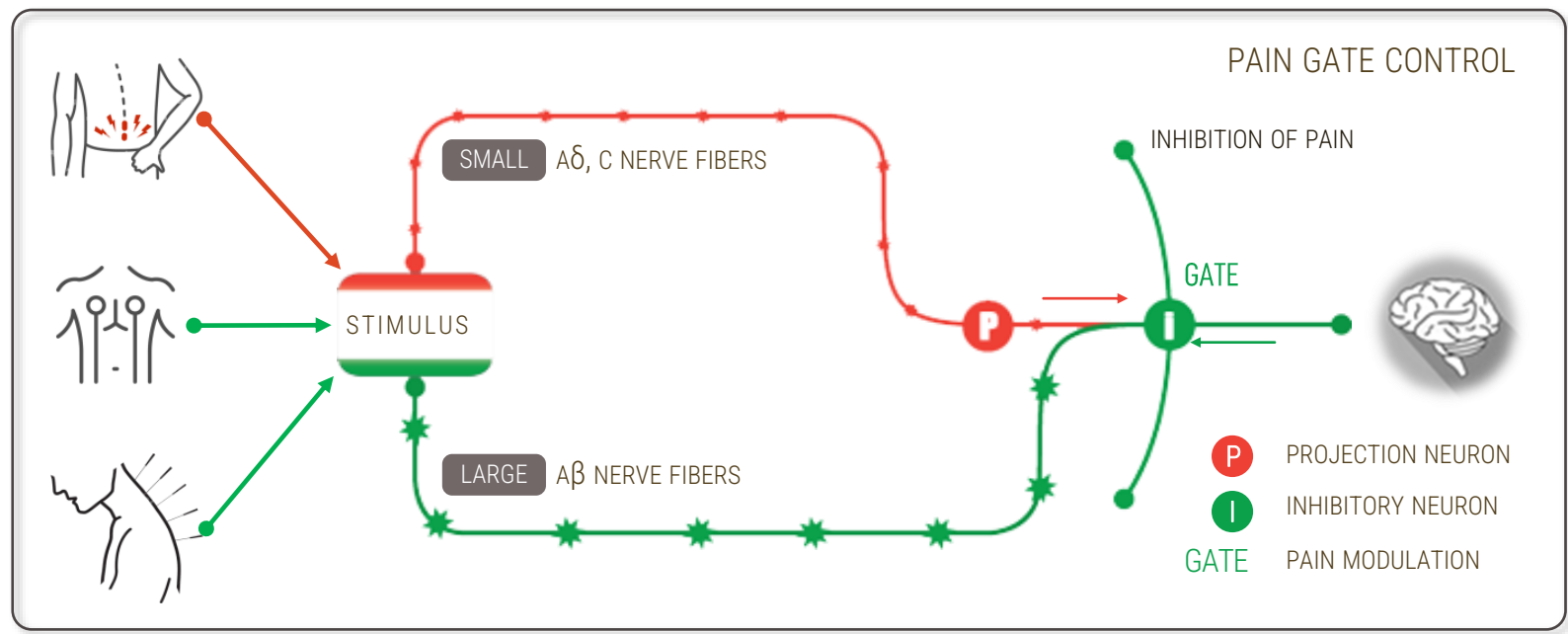
#### CHRONIC PAIN - MEAT

Move Exercise Analgesia Therapy  
Multidisciplinary modalities



Acupuncture can stimulate the Vagus (CN<sup>X</sup>) nerve which in turn induces anti-inflammatory effects on the body.<sup>1</sup>

<sup>1</sup> Anti-Inflammatory Effects of Acupuncture Stimulation via the Vagus Nerve  
<https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0151882>



**ACUPUNCTURE FOR INFLAMMATION**

- Affects brains pain signaling
- Releases endorphins
- Reduces inflammation
- Improves local circulation
- Improves oxygen perfusion
- Increases blood flow

Study finds acupuncture elevates nitric oxide, leading to pain reduction<sup>4</sup>

**ACTIVATING GATE CONTROL FOR PAIN RELIEF**

Acupuncture, has been shown to increase the release of inhibitory neurotransmitters *norepinephrine, serotonin & enkephalins*, activating the descending inhibitory pain pathway.<sup>3</sup>

MODALITIES

- TENS Biphasic
- ES HVPD
- Ultrasound
- Hot/Cold therapy
- Iontophoresis
- LLLT
- Acupuncture

PAIN



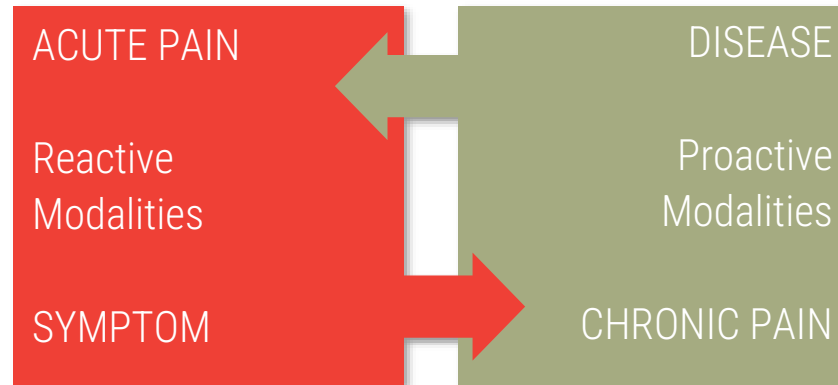
- LLLT - Laser
- Phonophoresis
- Manual therapies
- Tui Na
- Acupuncture
- Acupressure
- Medical Qi Gong

TRIGGER POINT



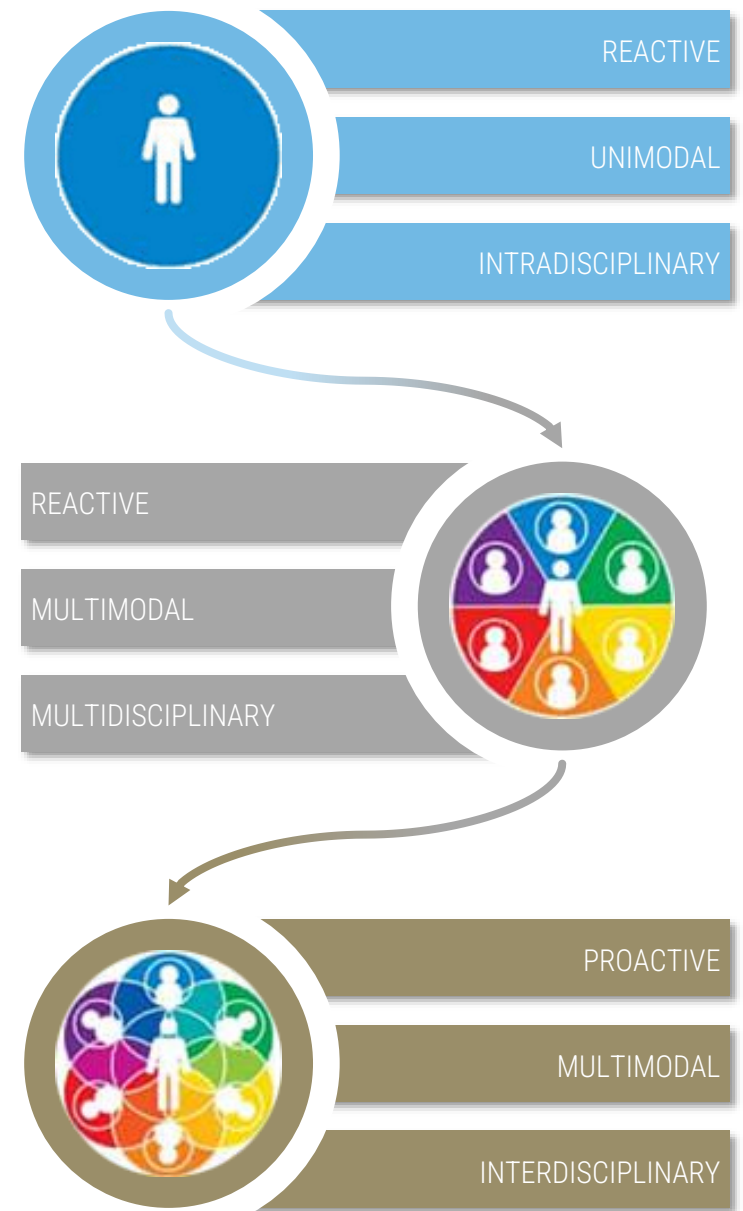
- ES high Voltage
- ES Low interferential
- Biofeedback
- Manual therapies
- Sport, water therapy
- Tai Chi, Qi Gong
- Kinesiology, Yoga

MUSCLE REEDUCATION



**RICE** - ACUTE PAIN  
 Rest Ice Compress Elevate  
 Symptom modalities

CHRONIC PAIN - **MEAT**  
 Move Exercise Analgesia Therapy  
 Multidisciplinary modalities



# ACUPUNCTURE RESEARCH FOR PAIN



“Acupuncture is one of the more clinically effective physical therapies for osteoarthritis and is also cost-effective”

White Rose, National Institute for Health Research  
<https://eprints.whiterose.ac.uk/111985>  
[doi.org/10.3310/pgfar05030](https://doi.org/10.3310/pgfar05030)



“Acupuncture is associated with improved pain outcomes compared with sham-acupuncture and no-acupuncture control”

JAMA Acupuncture for Chronic Pain  
<https://jamanetwork.com/journals/jama/article-abstract/1835483>  
[doi:10.1001/jama.2013.285478](https://doi.org/10.1001/jama.2013.285478)



“Acupuncture proved a highly demanded treatment option for chronic pain conditions within the German research program”

Acupuncture for chronic pain Tech Univ. Munich  
<https://jamanetwork.com/journals/jama/article-abstract/1835483>  
[doi.org/10.1016/j.ctim.2006.09.005](https://doi.org/10.1016/j.ctim.2006.09.005)



“Acupuncture is effective for the treatment of chronic pain and is therefore a reasonable referral option”

Acupuncture for Chronic Pain Jama Network (meta analysis)  
<https://jamanetwork.com/journals/jama/article-abstract/1835483>  
[doi:10.1001/archinternmed.2012.3654](https://doi.org/10.1001/archinternmed.2012.3654)



**RESEARCH TASK FORCE RTF**  
**DR. ARAM AKOPYAN M.D.**

Paradigm shift has proven the need for integrated alternative therapies for chronic pain management



Substantial clinical, scientific evidence based research to show efficacy of acupuncture for chronic pain management

ETCMA – RTF webinar series, toolkits, marketing assistance, country visits, promotion, inclusion into research opportunities



Paradigm shift to interdisciplinary centers for patient care. RTF support and toolkits to introduce and discuss services we can provide



Increased opportunities to contribute to patient care, engender trust and cooperation with physicians and improve our standing

