Chronic Pain: Treat or Refer?

Dr. Jennifer Hah, MD, MS

October 8th, 2025

1

Housekeeping

- Who's in the room today? (Name, organization, role)
- To eliminate any background noise during today's presentation your audio has been muted upon entry.
- We encourage questions and open discussion. You can unmute your audio to engage verbally or through the Chat box.
- This event is being recorded.

2

Compass Healthcare Collaborative
Financial Disclosure, Mitigation of Financial Relationships, Accreditation, & Credit Designation

- The Compass Healthcare Collaborative (Compass) is committed to providing CME that is balanced, objective, and evidenced-based. In accordance with the Accreditation Council for Continuing Medical Education Standards for Integrity and Independence all parties involved in content development are required to disclose all conflicts of interest with ACCME defined ineligible companies.
- Compass Healthcare Collaborative have identified, reviewed, and mitigated all conflicts of interest that speakers, authors, course directors, planners, peer reviewers, or relevant staff disclosed prior to the delivery of any educational activity.
- The CME planning committee who are in a position to control the content of this CME Activity, have no relevant financial relationships with ineligible companies to disclose.
- Jennifer MyunghaeHah, MD discloses she is a consultant for Nalu Medical and SPR Therapeutics
- Compass Healthcare Collaborative have identified, reviewed, and mitigated all conflicts of interest that speakers, authors, course directors, planners, peer reviewers, or relevant staff disclosed prior to the delivery of any educational activity. Remaining persons in control of content have no relevant financial relationships.

Accreditation
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Iowa Medical Society (IMS) through the joint providership of Compass Healthcare Collaborative and Stader Opioid Consultants. Compass Healthcare Collaborative is accredited by the IMS to provide continuing medical education for physicians.
Credit Designation
Compass Healthcare Collaborative designates this live activity for a maximum of **0.5** *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Commercial Support
This Activity was developed without support from any ineligible company.*The ACCME defines ineligible companies as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. Note: The ACCME does not consider providers of clinical service directly to patients to be commercial interests – unless the provider of clinical services is owned, or controlled by, and ACCME defined ineligible company.
Disclosure: Compass adheres to the Standards for Integrity and Independence in Accredited Continuing Education. The content of this activity is not related to products or the business lines of an ACCME-defined ineligible company. None of the planners or moderators for this educational activity have relevant financial relationships to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing products used by or on patients.

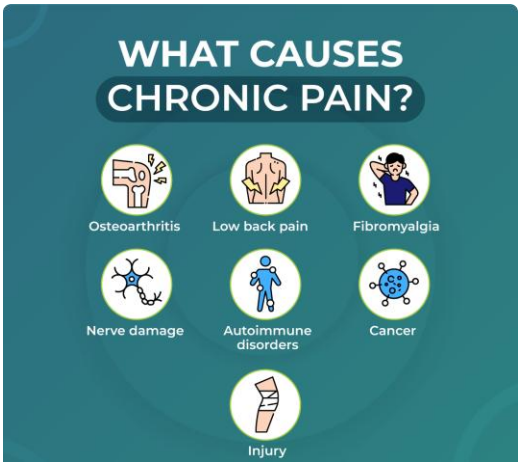
Note: *After participating in our event, you will receive a Certificate of Attendance detailing the number of AMA PRA Category 1 Credits™ you can claim. This certificate does not automatically award continuing education credit; it is provided for self-reporting requirements and must be submitted to your respective state board for license renewal. Thank you for your attention to this matter, and feel free to reach out to Amber Rizzo at rizzoa@compasshcc.org if you have further questions.*

3

Types of Chronic Pain

Compass SHARP

- **Musculoskeletal pain originates from muscles, bones, and joints.**
- **Neuropathic pain results from nerve damage or dysfunction.**
- **Inflammatory pain is caused by tissue inflammation and immune response.**
- **Visceral pain arises from internal organs and is often diffuse.**
- **Nociplastic pain involves altered pain processing without clear tissue damage.**



4

Biopsychosocial Conceptualization

The biopsychosocial conceptualization of pain examines the interplay of biological, psychological, and social factors in the etiology and maintenance of a pain condition.

Prasad R, Hah JM. Multidisciplinary Care of Chronic Pain. In: Longnecker DE, Newman MF, Mackey S, Sandberg WS, Zapol WM. Anesthesiology. Third edition. ed. New York: McGraw-Hill Education; 2017.

5

Biopsychosocial Model of Chronic Pain

- Biological/genetic factors: Determine the degree of illness and influence pain tolerance/thresholds
- Psychological factors: Foster sinister beliefs about pain. Psychological comorbidities can also contribute to a sense of helplessness
- Social factors: Significant other's response to pain, home/work environment, support system's attitudes and beliefs about pain

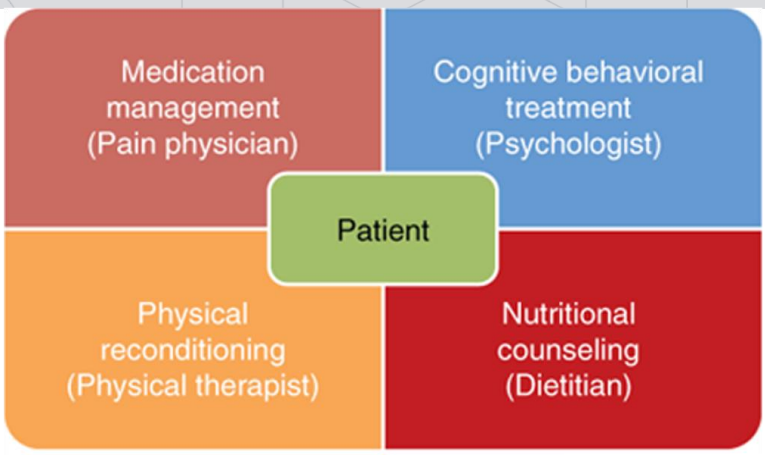
6

Best Practices in Chronic Pain Management

- Integrate multidisciplinary approaches including medical, physical, and psychological treatments.
- Utilize interventional options such as nerve blocks and epidural injections when appropriate.
- Tailor treatment plans to individual patient needs and responses.
- Promote collaboration with pain specialists.
- Emphasize patient education and setting realistic treatment goals.

7

Multidisciplinary Care

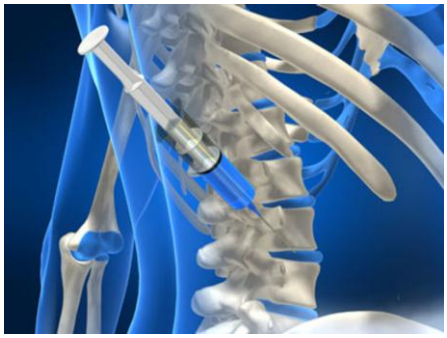


Prasad R, Hah JM. Multidisciplinary Care of Chronic Pain. In: Longnecker DE, Newman MF, Mackey S, Sandberg WS, Zapol WM. Anesthesiology. Third edition. ed. New York: McGraw-Hill Education; 2017.

8

Role of Pain Management Specialists

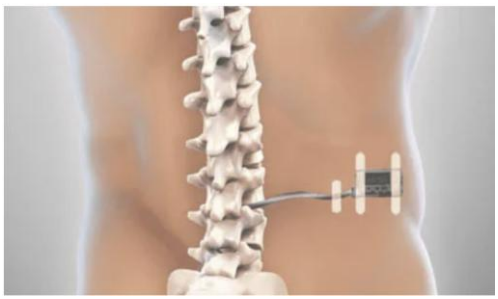
- Pain specialists focus on diagnostics and interventional treatments in the context of multidisciplinary care.
- They may not prescribe opioids for long-term use due to safety and regulatory concerns.
- Specialists provide multimodal strategies including physical therapy, psychological support, non-opioid medications, and procedures.
- Referral is appropriate when pain is refractory or diagnostic uncertainty exists.



9

Pain Management Specialist

- A medical provider who focuses on diagnosing, treating, and improving quality of life for patients with acute, chronic, or cancer-related pain — especially when pain is complex, persistent, or doesn't respond to standard treatments
- Usually trained first in anesthesiology, physical medicine & rehabilitation (PM&R), neurology, or sometimes psychiatry or family/internal medicine
- Completes fellowship training in pain medicine



10

Pain Management Specialty Services:

Interventional Procedures (many are performed under imaging guidance)

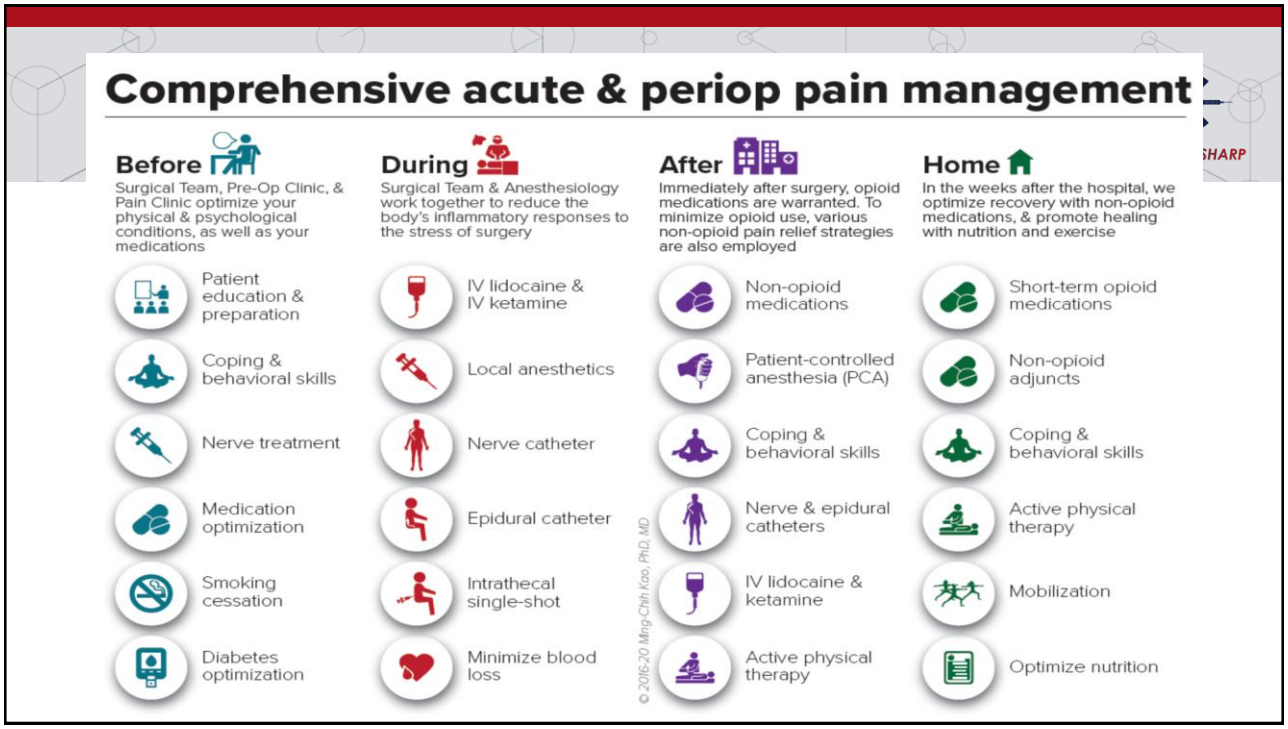
- Epidural steroid injections
- Facet joint injections or medial branch blocks
- Radiofrequency ablation
- Nerve blocks
- Joint injections
- Spinal cord stimulation
- Intrathecal pump implantation
- ETC…

11

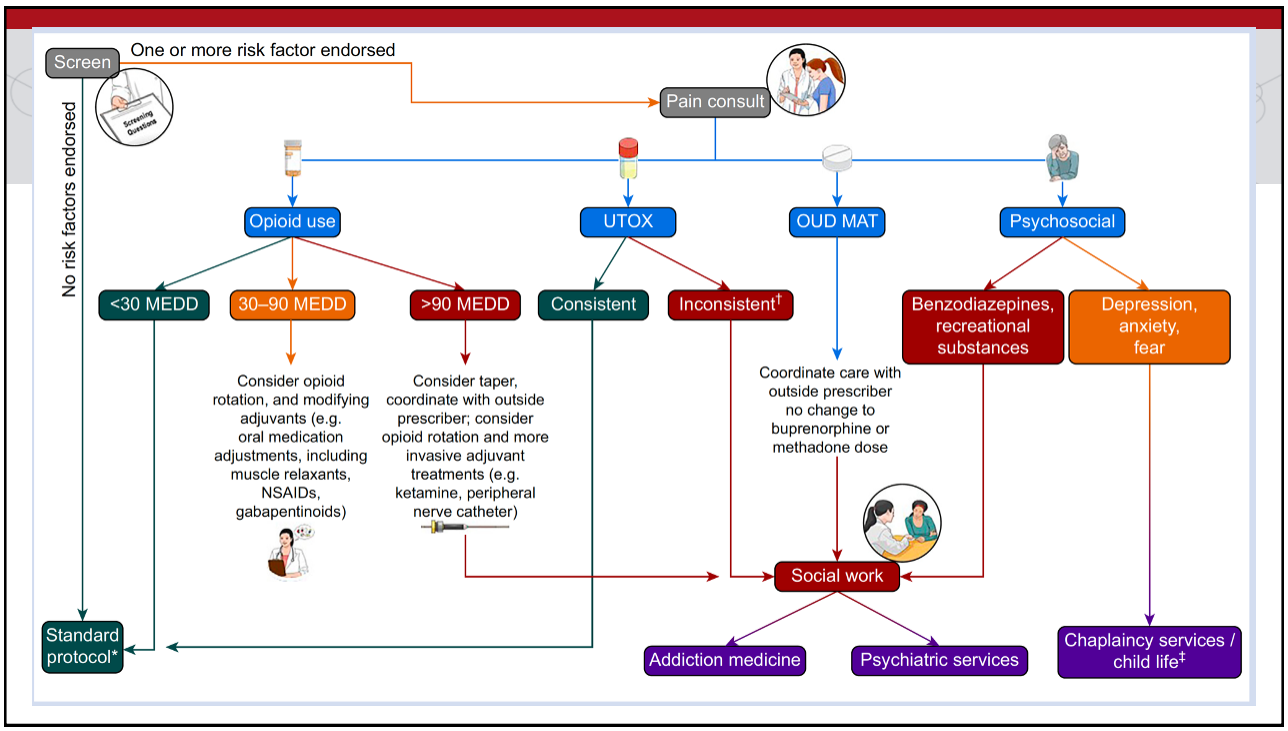
Co-Management Strategies

- Effective co-management requires clear communication and shared treatment goals.
- Surgical practices and pain specialists should define roles and responsibilities for each patient.
- Regular updates and collaborative decision-making improve outcomes.
- Patient education is key to setting realistic expectations and enhancing adherence.

12


Comprehensive acute & periop pain management
Before
Surgical Team, Pre-Op Clinic, & Pain Clinic optimize your physical & psychological conditions, as well as your medications
Patient education & preparation
Coping & behavioral skills
Nerve treatment
Medication optimization
Smoking cessation
Diabetes optimization
During
Surgical Team & Anesthesiology work together to reduce the body's inflammatory responses to the stress of surgery
IV lidocaine & IV ketamine
Local anesthetics
Nerve catheter
Epidural catheter
Intrathecal single-shot
Minimize blood loss
After
Immediately after surgery, opioid medications are warranted. To minimize opioid use, various non-opioid pain relief strategies are also employed
Non-opioid medications
Patient-controlled anesthesia (PCA)
Coping & behavioral skills
Nerve & epidural catheters
IV lidocaine & ketamine
Active physical therapy
Home
In the weeks after the hospital, we optimize recovery with non-opioid medications, & promote healing with nutrition and exercise
Short-term opioid medications
Non-opioid adjuncts
Coping & behavioral skills
Active physical therapy
Mobilization
Optimize nutrition
© 2016-20 Ming-Chih Kao, PhD, MD

13

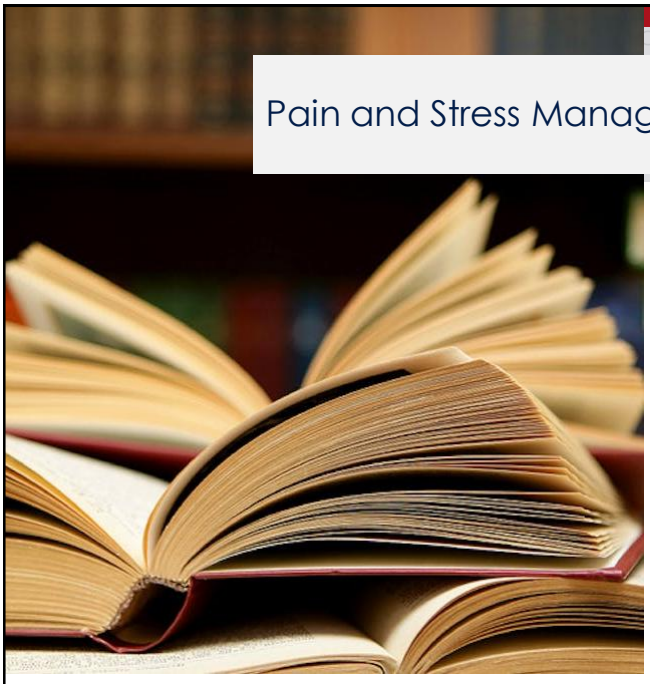

Screen
One or more risk factor endorsed
No risk factors endorsed
Pain consult
Opioid use
UTOX
OUD MAT
Psychosocial
<30 MEDD
30–90 MEDD
>90 MEDD
Consistent
Inconsistent†
Benzodiazepines, recreational substances
Depression, anxiety, fear
Consider opioid rotation, and modifying adjuvants (e.g. oral medication adjustments, including muscle relaxants, NSAIDs, gabapentinoids)
Consider taper, coordinate with outside prescriber; consider opioid rotation and more invasive adjuvant treatments (e.g. ketamine, peripheral nerve catheter)
Coordinate care with outside prescriber no change to buprenorphine or methadone dose
Social work
Standard protocol*
Addiction medicine
Psychiatric services
Chaplaincy services / child life‡

14

Relaxation and Pain Management Apps

- Curable: Neuroscience education, brain retraining, meditation and expressive writing.
- Breathe2Relax is a personalized stress management tool which provides detailed information on the effects of stress on the body and diaphragmatic breathing.
- Headspace teaches you the basics of meditation and mindfulness in just 10 minutes a day.
- Kardia Deep Breathing is a hands-on paced breathing exercise. Capitalizing on touch-screen technology, as users can vary their breath rate by simply swiping on the screen.
- The Mindfulness App has a large variety of meditations for both relaxation and mindfulness exercises.

15

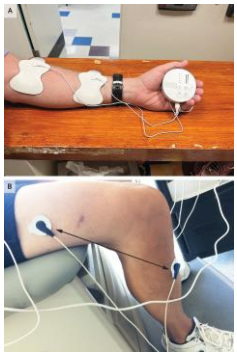


Pain and Stress Management Books

- Pain Survival Guide by Turk and Winters
- Managing Pain Before it Manages You – by Caudill
- Full Catastrophe Living – by Jon Kabat-Zinn
- Living Beyond Your Pain- JoAnne Dahl & Tobias Lundgren
- Bouncing Back: Skills for Adaptation to Injury, Aging, Illness, and Pain- by Richard Wanlass

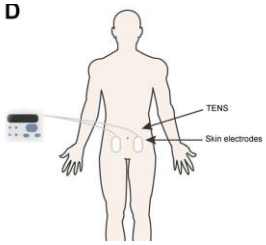
16

Transcutaneous Electrical Nerve Stimulation



Smith TJ et al. N Engl J Med2023;389:158-164

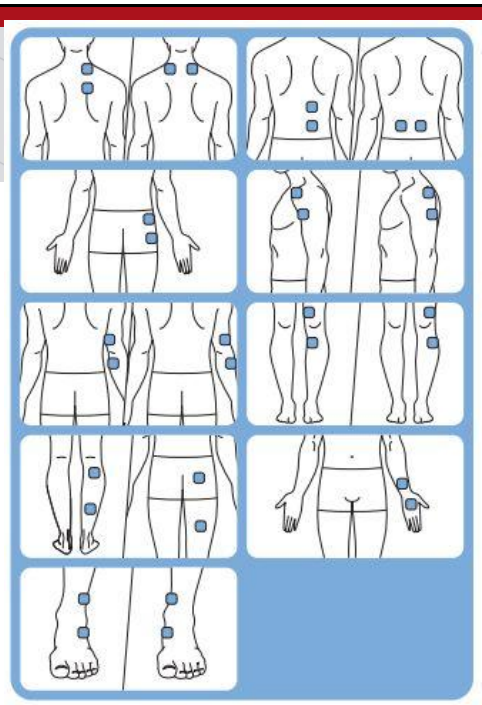
- Low-intensity electrical signals through conductive gel pads placed over the skin at sites of pain
- Settings to vary intensity, frequency, and width of electrical pulse
- High frequency, low-intensity stimulation recruits Aβ fibers
- Low frequency, high-intensity stimulation recruits Aδ and C fibers
- Analgesic effects disappears within minutes to hours after discontinuation
- Contraindications: cardiac pacemakers, epilepsy, application to injured skin
- Common AEs: skin irritation, erythema, tenderness at site of electrode application



17

TENS Take Home Points

- Advise patients to self-administer strong non-painful TENS within or close to the site of pain and to adjust pulse frequency, duration and pattern to a comfortable level
- Administer TENS as often as needed
- Physiological tolerance may develop
- TENS sensations rather than specific current settings may be the critical factor similar to sensations such as rubbing, cold, and heat therapy



18

Repetitive Transcranial Magnetic Stimulation

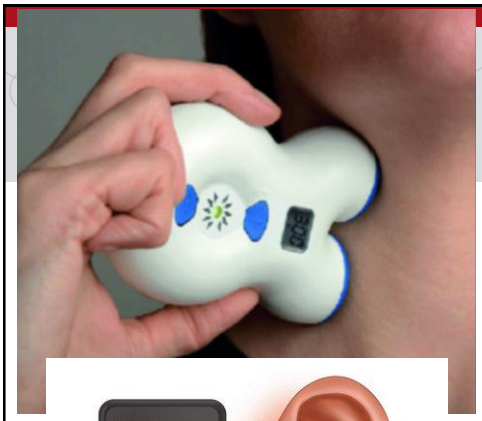
- FDA Approved
  - MDD (non-responsive to at least one antidepressant)
  - OCD
  - Migraine (ages 12 and older)
- Second-line for treatment-resistant neuropathic pain
- Improves stroke rehabilitation, spasticity, movement disorder, treatment-resistant tinnitus
- GAD, SUD, eating disorders, schizophrenia

19

Vagal Nerve Stimulation

- FDA-Approved Indications:
  - Refractory Epilepsy: Adjunctive therapy for reducing seizure frequency in patients aged 12 years and older with partial-onset seizures refractory to anti-epileptics
  - Treatment–resistant Depression: Adjunctive long-term treatment for chronic or recurrent depression in patients aged 18 years or older experiencing a major depressive episode unresponsive to four or more adequate antidepressant treatments
  - Episodic cluster headaches (acute and preventative), migraine (acute and preventative), hemicrania (paroxysmal and continua)
- Europe-Approved for asthma, airway reactivity, primary headache, GI disorder, anxiety
- Investigative: chronic pancreatitis, esophageal pain, IBS, postoperative ileus

20



Noninvasive Vagal Nerve Stimulation

- Target: cervical vagus on neck
- Electrical signal: 5 kHz sine wave burst lasting 1ms (5 sine waves, each lasting 200 µs), bursts repeated once every 40ms (25Hz), 24 V peak voltage, 60 mA peak current
- Apply to neck with conductive gel, unilateral application vs. alternating sides
- Exclusions: carotid atherosclerosis, surgical injury to vagus, children, pregnant women, hemodynamic instability , active implantable medical device (pacemaker, hearing aid), metallic device near neck

21

Noninvasive Vagal Nerve Stimulation Continued

Compass SHARP

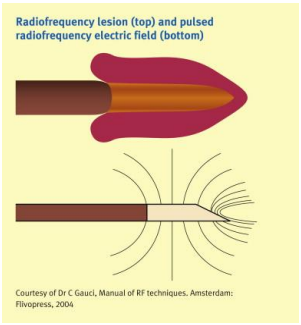
- Acute dosing: 2 two-minute stimulations, can be repeated up to 24 stimulations a day
- Preventive dosing: 2 two-minute stimulations twice daily
- Adverse effects: Discomfort, irritation, redness, tingling, prickling at application site, muscle twitching/contractions, pain in face/head/neck/teeth, dizziness
- Anti-inflammatory effects in animal models of colitis
- Biological remission of Crohn disease and RA
- 43% response rate after 3-6 weeks of nVNS for medically refractory gastroparesis, improvement in bloating and abdominal pain
- Adolescents with IBS or chronic abdominal pain-related functional GI disorders

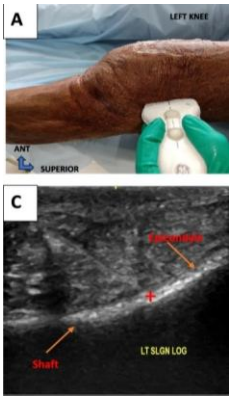
Gottfried-Blackmore A, Habtezion A, Nguyen L. Noninvasive vagal nerve stimulation for gastroenterology pain disorders. Pain Manag. 2021 Jan;11(1):89-96. doi: 10.2217/pmt-2020-0067. Epub 2020 Oct 28. PMID: 33111642; PMCID: PMC7787175.

22

Persistent Post-Surgical Pain Treatment

- **Peripheral Nerve Ablation or Pulsed Radiofrequency (PRF)**
  - **Data is limited by observational and retrospective studies**
  - **Chronic post-arthroplasty hip pain**
  - **Persistent post-knee arthroplasty pain**
  - **Persistent post-shoulder arthroplasty pain**

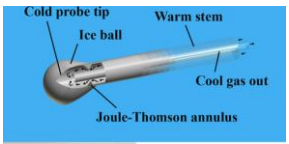




23

Cryoneurolysis

- Targeting intercostal nerves during thoracotomy, mastectomy
- Inguinal herniorrhaphy
- Cryoneurolysis after amputation
- Targeting anterior femoral cutaneous, infrapatellar branch of saphenous nerve during TKA
- Targeting suprascapular nerve before rotator cuff repair



24

Cryoneurolysis Continued

Compass SHARP

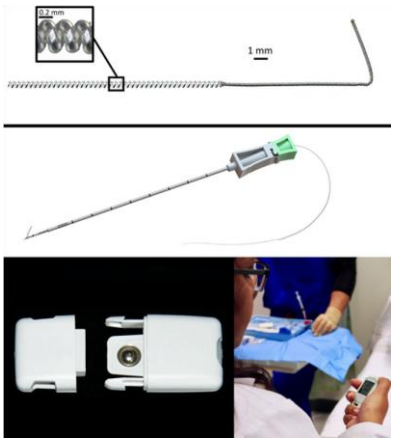
- Freeze of 30-120 seconds followed by thaw of 30 to 60s
- Contraindications: cold urticaria, Raynaud's disease, cryofibrinogenemia, cryoglobulinemia, paroxysmal cold hemaglobinuria
- Complications: pain, superficial bleeding, bruising, neuropathic pain (possibly secondary to nerve manipulation)

25

Peripheral Nerve Stimulation

Compass SHARP

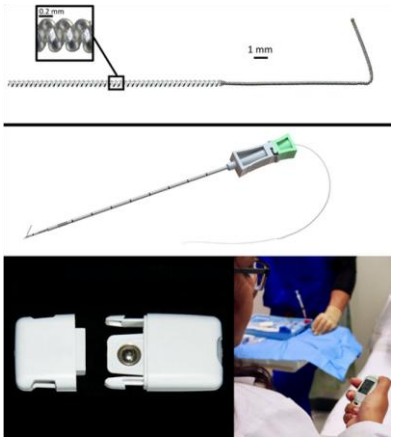
- Flexible lead loaded into 20g introducer
- Up to 60 days
- Insertion near femoral (inguinal) and sciatic (subgluteal) nerves 7 days before TKA, preoperative adductor canal block, PNS administered at 20 hours up to median of 38 days



26

Peripheral Nerve Stimulation Continued (Cont'd)

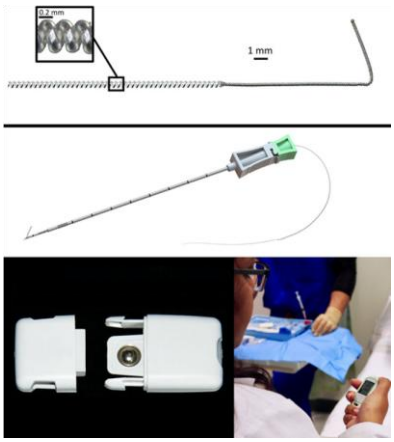
- Bunion removal
- ACL reconstruction
- Rotator cuff repair
- Delay of 1h between onset of stimulation and maximal analgesia
- 12 to 100 Hz, 0.2 to 30 mA, pulse duration 10 to 200 ms



27

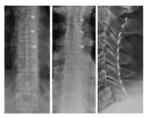
Peripheral Nerve Stimulation Cont'd

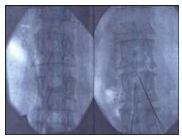
- Contraindications: deep brain stimulation system, implanted active cardiac implant (e.g., pacemaker or defibrillator), or other neurostimulator
- Complications: Infection, nerve injury, skin irritation, lead fracture



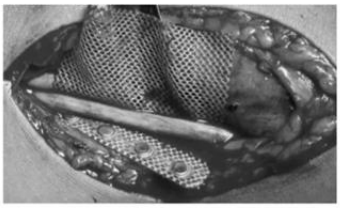
28

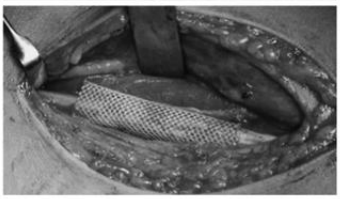
Diagnosis & Management: Mononeuropathy

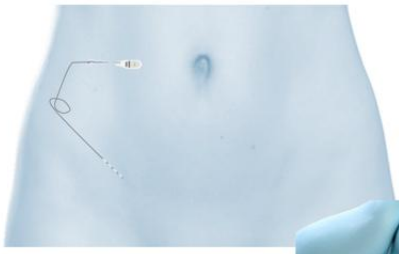


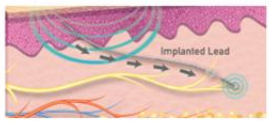


MONONEUROPATHIC PAIN → RF/RFA PNS → NERVE SURGERY (TRANSPOSITION, RELEASE) → SCS DRG Stimulation → ITP









29

Compass SHARP

30

Upcoming Events

Next month's Lunch and Learn:

Motivational Interviewing: Inspiring Behavior Change

November 12th, 12:10 - 12:50 pm CT **LINK** to register

Keeping you SHARP Office Hours: LINK to register

4th Wednesday of the month, 12:00 – 1:00 pm CT

31

Resources

Access provider and patient resources on the Compass SHARP webpage by scanning the QR code below.

Subscribe to the monthly *On Point* Compass SHARP newsletter by scanning the QR code below.

Access the May edition

32

iCompass Academy

- **This webinar will be recorded and be available on iCompass Academy**
- **What is iCompass Academy?**
  - iCompass Academy offers an online suite of free eLearning products including webinars, courses and virtual events that can be accessed anywhere at any time.
- Scan the QR code for [iCompass Academy]

33

Follow Compass

[LinkedIn] [Facebook] [X (Twitter)]

34

Reach The Program

Compass SHARP

Jillian Schneider, MHA, CPPS
Program Director
Compass Healthcare Collaborative
schneiderj@compasshcc.org

Sharmie Russell, ACEA
Project Support Specialist
Compass Healthcare Collaborative
russells@compasshcc.org

Melissa Perry, MSW, LCSW
Project Coordinator
Compass Healthcare Collaborative
perrym@compasshcc.org

Amanda Donlon, BSN, RN, CDCES, CPHQ, CPPS
Clinical Improvement Consultant
Compass Healthcare Collaborative
donlona@compasshcc.org

35

Thank you

Compass SHARP

36