IATROGENIC SUBSTANCE USE DISORDER

Addiction Medicine or Chronic pain Medicine?

Jacobs School of Medicine and Biomedical Sciences
University at Buffalo

Scope of the Problem

- Opioid use for chronic pain is complicated by tolerance, hyperalgesia and addiction
- 5-24% of patients treated for chronic back pain with opioids misuse their medications
- Opioid discontinuation and counseling has been the standard-of-care

America's First Multi-disciplinary Pain Clinic

- Dr Bonica 1960
  University of Washington, Seattle
- Over 100 nationally by early 90s

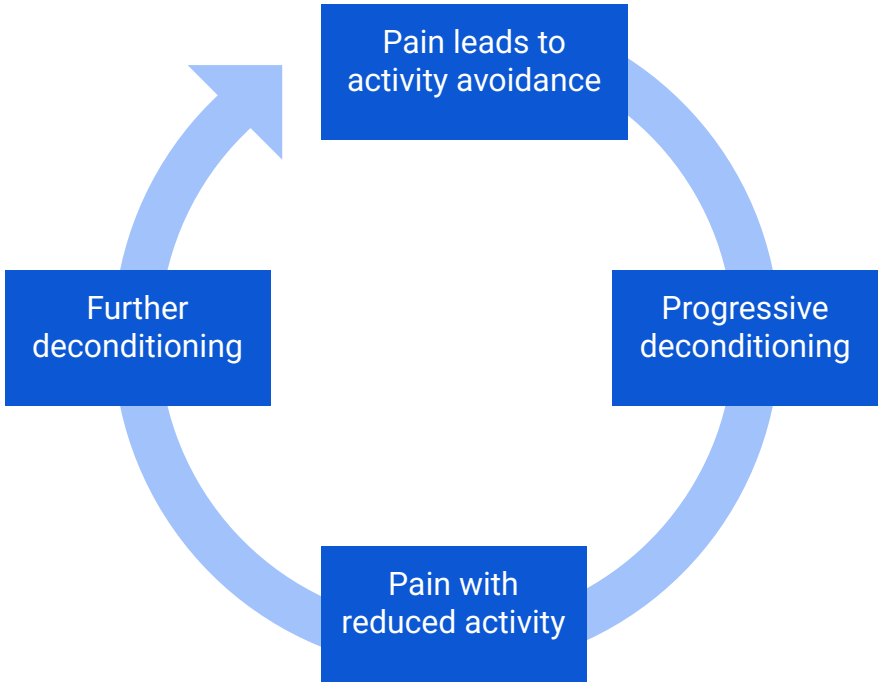
America's First Pain Clinic

- Biopsychosocial approach
- Exercise / diet / medical and life strategies
- Opiates played a minor role

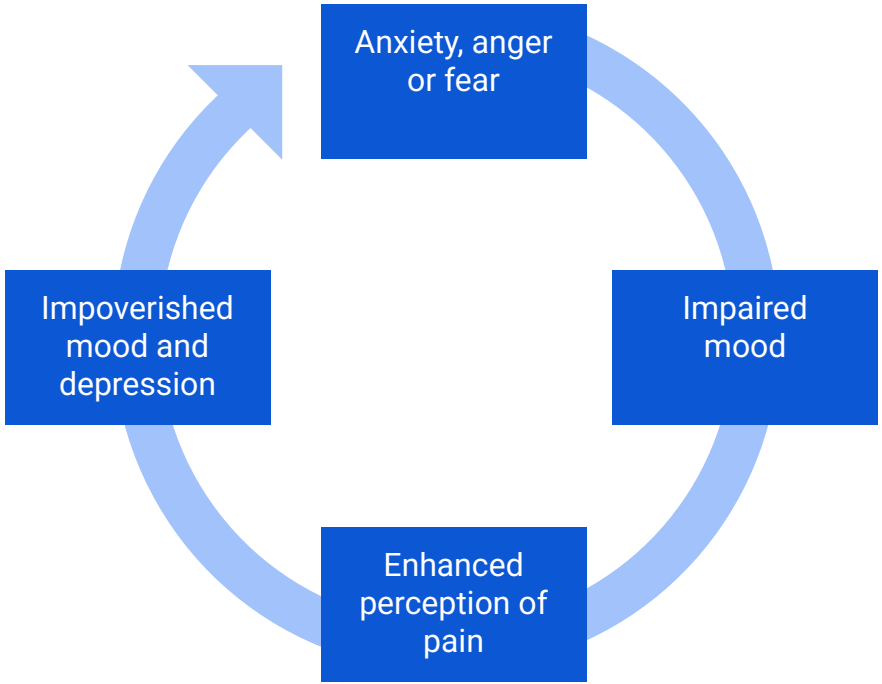
America's First Pain Clinic

- Multidisciplinary
- OT, PT, psychologist, social worker, others

Physical Vicious Circle

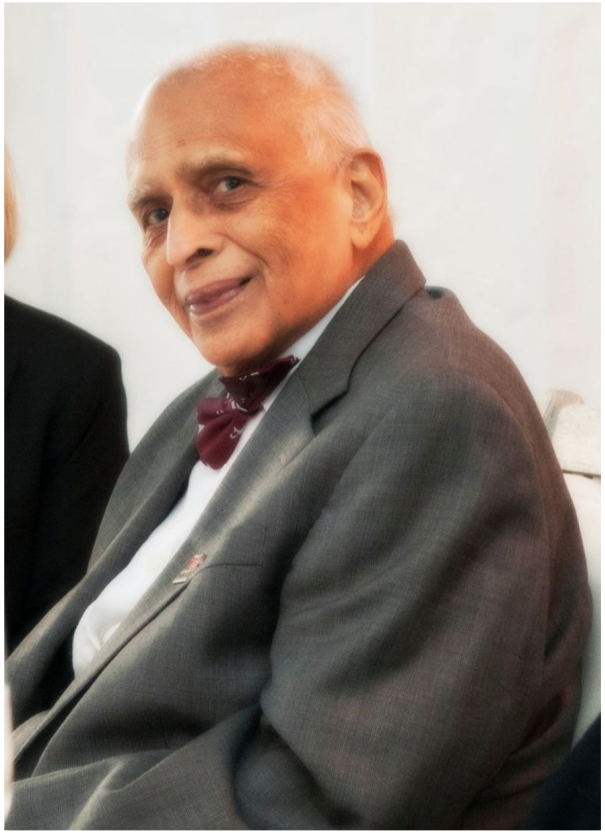


Psychological Vicious Cycle Associated With Pain



Education

CINCINNATI



1994 | Pain Rehab of WNY

Medical Director, Dr Bansal

- 1st Multidisciplinary pain center in Buffalo
- 3 Board Certified Fellowship trained Interventional pain doctors
- 2 psychologists
- 2 physical therapists
- Occupational therapists

Pain Rehab of WNY

- Insurance companies did not want to pay for multidisciplinary approach
- SHORT SIGHTED
- Opiates were cheaper and faster!!!

Billionaire Sacklers Granted Lifetime Legal Immunity in Opioid Settlement

Patient on Opioids

- Addiction patient
- Patient placed on chronic opioid therapy
- Opioid task force switched many patients to suboxone pain did not get treated

Diagnosis: Chronic Pain Disorder

- History and Physical
- Old records
- Diagnostic Testing
- Differential diagnosis

2024

JAMA Network Open

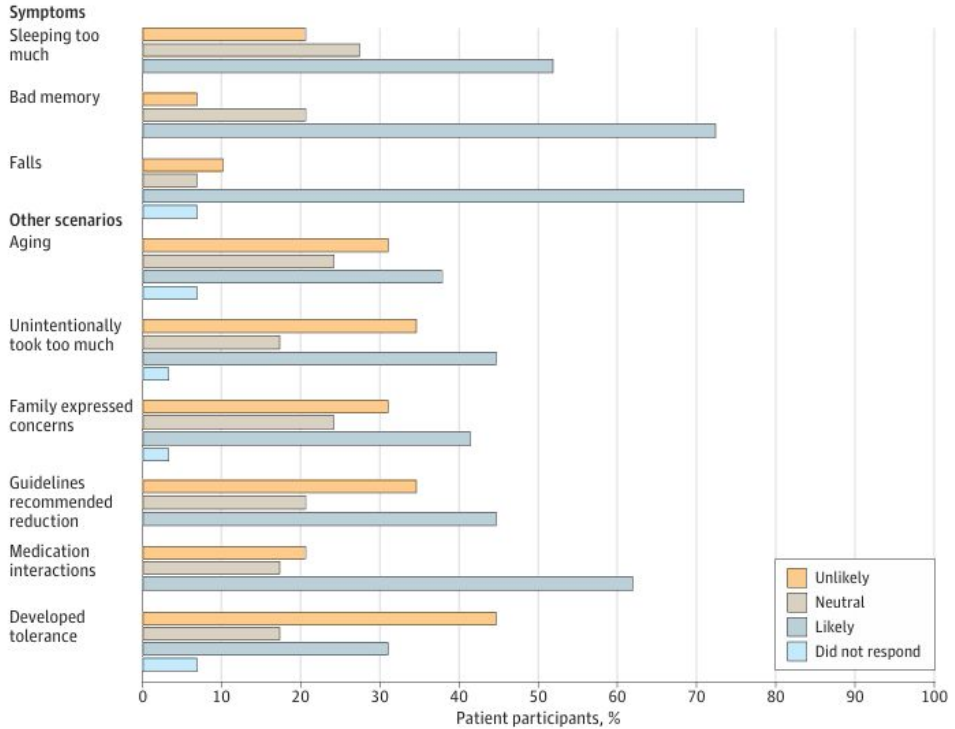
Original Investigation | Geriatrics

Older Adult and Primary Care Practitioner Perspectives on Using, Prescribing, and Deprescribing Opioids for Chronic Pain

Timothy S. Anderson, MD, MAS; Brianna X. Wang, BS; Julia H. Lindenberg, MD; Shoshana J. Herzig, MD, MPH; Dylan M. Berens, MS; Mara A. Schonberg, MD, MPH

- 15% of adults 65 years or older filled an opioid prescription in 2019
- 5% received long-term opioids

Figure 2. Patient Willingness to Consider Opioid Deprescribing Given Hypothetical Scenarios



JAMA Network Open. 2024;7(3):e241342. doi:10.1001/jamanetworkopen.2024.1342

Patient

"nobody actually talked to me about the risks of taking these medications."

- Patient resistance to deprescribing opioids
- Previous negative experiences that led to hesitation around tapering
- Fear Of Withdrawal

Clinician

Describing patients as defensive, adversarial, attached, and scared to stop opioids

- Lack of education “How to taper”
- Time consuming
- Leave them as is – “seem to be doing OK”
- No incentive –they come back monthly for the prescription

Independent, self-management programs

- Encourage physical activity and/or work activities despite residual pain goal of preserving functional status.
- Active techniques strengthening, stretching and range of motion physical exercise, which are typically home-based and self-directed.
- Community support/self-help groups, programs and/or networks
- Long-term use of pain medications, must take appropriate steps early in the course of care to avoid or minimize the risk of such

Section 1 – Pain intensity LUMBAR OSWESTRY SCORE

Section 2 – Personal care (washing, dressing etc)

Section 3 – Lifting

Section 4 – Walking*

Section 5 – Sitting

Section 6 – Standing

Section 7 – Sleeping

Section 8 – Sex life (if applicable)

Section 9 – Social life

Section 10 – Travelling

OSWESTRY LOW BACK DISABILITY QUESTIONNAIRE

Instructions: this questionnaire has been designed to give us information as to how your back pain has affected your ability to manage everyday life. Please answer every section and mark in each section only the ONE box which applies to you at this time. We realize you may consider 2 of the statements in any section may relate to you, but please mark the box which most closely describes your current condition.

1. PAIN INTENSITY
- ☐ I can tolerate the pain I have without having to use pain killers
- ☐ The pain is bad but I manage without taking pain killers
- ☐ Pain killers give complete relief from pain
- ☐ Pain killers give moderate relief from pain
- ☐ Pain killers give very little relief from pain
- ☐ Pain killers have no effect on the pain and I do not use them

2. PERSONAL CARE (e.g. Washing, Dressing)
- ☐ I can look after myself normally without causing extra pain
- ☐ I can look after myself normally but it causes extra pain
- ☐ It is painful to look after myself and I am slow and careful
- ☐ I need some help but manage most of my personal care
- ☐ I need help every day in most aspects of self care
- ☐ I don't get dressed, I wash with difficulty and stay in bed

3. LIFTING
- ☐ I can lift heavy weights without extra pain
- ☐ I can lift heavy weights but it gives extra pain
- ☐ Pain prevents me from lifting heavy weights off the floor, but I can manage if they are conveniently positioned, i.e. on a table
- ☐ Pain prevents me from lifting heavy weights, but I can manage light to medium weights if they are conveniently positioned
- ☐ I can lift very light weights
- ☐ I cannot lift or carry anything at all

4. WALKING
- ☐ Pain does not prevent me walking any distance
- ☐ Pain prevents me walking more than one mile
- ☐ Pain prevents me walking more than ½ mile
- ☐ Pain prevents me walking more than ¼ mile
- ☐ I can only walk using a stick or crutches
- ☐ I am in bed most of the time and have to crawl to the toilet

5. SITTING
- ☐ I can sit in any chair as long as I like
- ☐ I can only sit in my favorite chair as long as I like
- ☐ Pain prevents me from sitting more than one hour
- ☐ Pain prevents me from sitting more than ½ hour
- ☐ Pain prevents me from sitting more than 10 minutes
- ☐ Pain prevents me from sitting at all

6. STANDING
- ☐ I can stand as long as I want without extra pain
- ☐ I can stand as long as I want but it gives me extra pain
- ☐ Pain prevents me from standing for more than one hour
- ☐ Pain prevents me from standing for more than 30 minutes
- ☐ Pain prevents me from standing for more than 10 minutes
- ☐ Pain prevents me from standing at all

7. SLEEPING
- ☐ Pain does not prevent me from sleeping well
- ☐ I can sleep well only by using medication
- ☐ Even when I take medication, I have less than 6 hrs sleep
- ☐ Even when I take medication, I have less than 4 hrs sleep
- ☐ Even when I take medication, I have less than 2 hrs sleep
- ☐ Pain prevents me from sleeping at all

8. SOCIAL LIFE
- ☐ My social life is normal and gives me no extra pain
- ☐ My social life is normal but increases the degree of pain
- ☐ Pain has no significant effect on my social life apart from limiting my more energetic interests, i.e. dancing, etc.
- ☐ Pain has restricted my social life and I do not go out as often
- ☐ Pain has restricted my social life to my home
- ☐ I have no social life because of pain

9. TRAVELLING
- ☐ I can travel anywhere without extra pain
- ☐ I can travel anywhere but it gives me extra pain
- ☐ Pain is bad, but I manage journeys over 2 hours
- ☐ Pain restricts me to journeys of less than 1 hour
- ☐ Pain restricts me to short necessary journeys under 30 minutes
- ☐ Pain prevents me from traveling except to the doctor or hospital

10. EMPLOYMENT/ HOMEMAKING
- ☐ My normal homemaking/ job activities do not cause pain
- ☐ My normal homemaking/ job activities increase my pain, but I can still perform all that is required of me.
- ☐ I can perform most of my homemaking/ job duties, but pain prevents me from performing more physically stressful activities (e.g. lifting, vacuuming)
- ☐ Pain prevents me from doing anything but light duties.
- ☐ Pain prevents me from doing even light duties.
- ☐ Pain prevents me from performing any job or homemaking chores.

JOURNAL OF ADDICTIVE DISEASES
https://doi.org/10.1080/10550887.2019.1690929

Taylor & Francis
Taylor & Francis Group

Check for updates

Randomized clinical trial comparing buprenorphine/naloxone and methadone for the treatment of patients with failed back surgery syndrome and opioid addiction

Anne M. Neumann[a], Richard D. Blondell[a], Rachel A. Hoopsick[a] and Gregory G. Homish[b]

[a]Primary Care Research Institute, Department of Family Medicine, The State University of New York at Buffalo, Buffalo, NY, USA;
[b]Department of Community Health and Health Behavior, The State University of New York at Buffalo, Buffalo, NY, USA

Opioid Replacement Options

METHADONE

- 2 small studies
- Compared
- Methadone
- Discontinuation
- Results: methadone superior to discontinuation for pain management

-Kennedy *J Sub Abuse Treat* 1990;7:223

-Tennant *Arch Intern Med* 1982;142:1845

BUPRENORPHINE

- Case series of 95 patients
  - Abused opiates
  - Had chronic pain
- Given buprenorphine
- Results:
  - Provided analgesia
  - Limited drug abuse

-Malinoff *Am J Ther* 2005;12:379

NIH Public Access
Author Manuscript
J Addict Med. Author manuscript; available in PMC 2011 September 1.

Published in final edited form as:
J Addict Med. 2010 September ; 4(3): 140–146. doi:10.1097/ADM.0b013e3181ba895d.

A Clinical Trial Comparing Tapering Doses of Buprenorphine with Steady Doses for Chronic Pain and Co-existent Opioid Addiction

Richard D. Blondell, M.D., **Lisham Ashrafioun, M.A.**, **Christina M. Dambra, B.S.**, **Elisa M. Foschio, B.S.**, **Amy L. Zielinski, B.S.**, and **Daniel M. Salcedo, M.D.**
Department of Family Medicine and the Department of Rehabilitation Medicine, The State University of New York at Buffalo and the Erie County Medical Center Buffalo, New York

Randomized Clinical Trials

DETOXIFICATION V. BUPRENORPHINE

- 12 pain clinic patients
  - Had chronic pain
  - Self-reported addiction
- Followed for 6 months
- Results: protocol completed
  - 0/6 detox group
  - 5/6 buprenorphine group
  - P = 0.015 (favored BUP)
- Study stopped early

-Blondell *J Addict Med* 2010;4:140

METHADONE V. BUPRENORPHINE

- 54 self-referred patients
  - Chronic orthopedic pain
  - Aberrant drug taking
- Followed for 6 months
- Results: pain & drug use
  - Both groups had pain reduced
    - P = 0.043 from baseline
  - Illicit drug use: 0/13 v. 5/13
    - P = 0.039 favored methadone

-Neumann *J Addict Dis* 2012;32:68

Nociceptive Pain

a) Muscular - responds to exercises

b) skin, visceral organs, joints, tendons, or bones - responds to NSAIDS etc

Neuropathic Pain

--responds to antidepressants, anticonvulsant agents

OPIOIDS are the last option

Myofascial Pain

- 30-40% of patients who present to primary care offices with a complaint of pain
- 80-90% of patients referred have some component in a pain practice

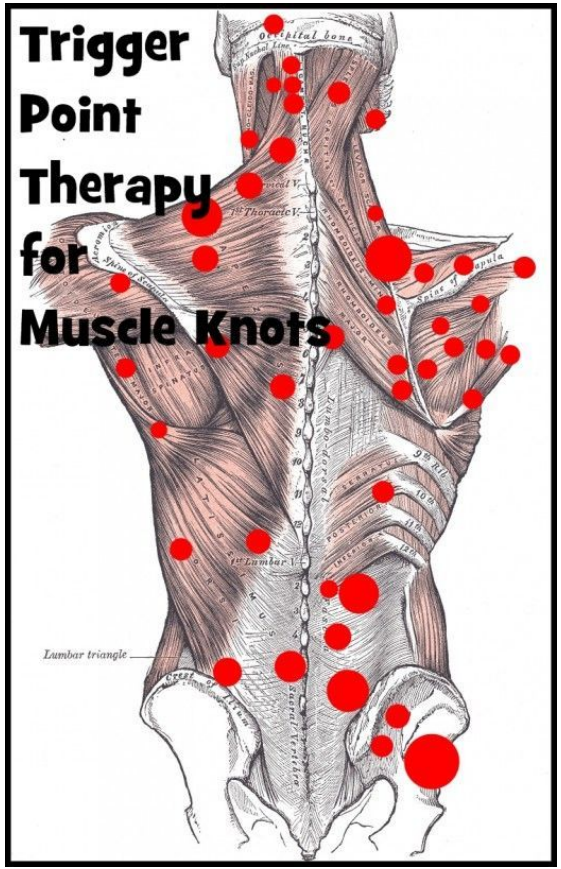

connective
tissue
kinda
mysterious
Myofascial Pain Syndrome
muscle
ouch

We Know Exercise Helps

- Medical training does not teach physician how to teach the patients an exercise program

- Handing out exercise sheet does not work


Travell & Simons'
Myofascial Pain and Dysfunction
The Trigger Point Manual
VOLUME 1. Upper Half of Body
Second Edition
DAVID G. SIMONS, M.D.
JANET G. TRAVELL, M.D.
LOIS S. SIMONS, P.T.
Illustrations by Barbara D. Cummings
VOLUME 2


Trigger
Point
Therapy
for
Muscle Knots
Lumbar triangle

- Janet Travell treated President Kennedy
- She wrote 2 beautiful books covering each muscle
- The techniques are not experimental
- Drug companies have money to promote their drugs
- EXERCISE, EXERCISE, EXERCISE

- A trigger point (TrP) is a small patch of tightly contracted muscle, an isolated spasm affecting just a tiny patch of muscle tissue
- A small patch of muscle chokes off its own blood supply, which irritates it even more — a vicious cycle called a “metabolic crisis.”

LEGACY PATIENTS: WCB

Can we get them off opioids?

Pratibha Bansal

Effect of a Structured Stretching Exercise Program on Resolution of Myofascial Pain and Opioid Usage in “Legacy Pain” Patients: A Retrospective Review

Pain Practice 2022

Background

- Opioids became a common approach to treating chronic musculoskeletal pain in the late 1990s despite a lack of good evidence
  - Newer guidelines have recommended weaning patients due to concerns of abuse and dangerous side effects
- "Legacy pain" patients have been maintained on opioids for long periods of time and their opioid management under new guidelines can be difficult
  - Myofascial pain is thought to be a common component of chronic pain in these patients
  - Myofascial pain is best treated with non-opioid techniques such as PT, exercise and massage
- Purpose of study: Can a physical led structured stretching exercise program improve outcomes of legacy pain patients?

Methods

- Retrospective review of workers' compensation patients seen in a community based interventional pain practice
- "Legacy pain" patients defined as those on opioids > 1 year prior to first clinic visit
- ***Intervention:*** All patients taught a structured stretching exercise regimen consisting of 14 lumbar, 5 thoracic and 7 cervical stretches as appropriate
  - Continued receiving non-opioid adjuvants and interventions at provider discretion
- Primary outcome assessed:
  - Morphine milligram equivalents (MMEs)
- Secondary outcomes assessed:
  - Pain scores, function scores (Oswestry), pain symptomatology, non-opioid adjuvant use, and interventional procedure rate

Lumbar Stretches

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LOW BACK (LUMBAR) & LOWER EXTREMITY STRETCHES

FROM **PRATIBHA BANSAL, MD** FT. **SAMMY IRACI III, PT** OF **FAMILY CARE PHYSICAL THERAPY**

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin lying with your hands clasped over your knee. Pull your knee towards your chest until you feel a stretch in the buttocks/hip. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin lying with your hands clasped over your knee. Pull your knee towards your opposite shoulder until you feel a stretch in the buttocks/hip. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin lying on your back. Bring the bottoms of your feet together and let your knees fall to the side until a stretch is felt in the groin/inner hip.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin lying on your back with knees together. Let your knees fall to the side while keeping your hands clasped behind your head. Elbows should be touching the floor throughout this stretch. The upper body should stay flat on the floor. A stretch should be felt on the opposite side of the back. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin lying on your back. Use a strap/belt/rope around the foot. Pull your leg up until you feel a stretch in the back of the thigh. If the knee begins to bend you are pulling too far. Do not let the leg bounce. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin in a long sit position on the floor with your back against the wall. Reach towards your toes keeping your knees straight until you feel a stretch in the back of the thighs.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin in a long sit position on the floor. Reach towards the outside of your Left leg bending as far forward as you can. Slowly bend your head downwards to stretch the low and mid back. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin with legs crossed on the floor. Reach towards the center bending as far forward as you can. Slowly bend your head downwards to stretch the low back.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin with legs crossed on the floor. Reach towards the Right bending as far forward as you can. Slowly bend your head downwards to stretch the low back. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 10 seconds

Begin lying on your stomach. Use your arms to press up without your hips coming off the table. Use the arms to arch the back and once at peek height, extend the head back to increase the degree of stretch.

REPS: 5 — 7 days a week
HOLD: 15 seconds

In standing, put one foot behind you keeping the knee straight until you feel a stretch in the calf. To increase the amount of stretch, begin to slowly bend the front knee without picking the heel up on the back foot. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

Begin lying at the edge of your bed or couch. Attach a strap, bed sheet, or belt to your foot with the leg hanging off the side. Pull your foot/ankle towards you until a stretch is felt in the front of the thigh but do not let the knee rise. Perform on both sides.

REPS: 5 — 7 days a week
HOLD: 15 seconds

In standing, grab your foot and pull towards your buttock until a stretch is felt in the front of the thigh. Do not lean forward. Keep the back as straight as possible. Perform on both sides.

REPS: 30 — 7 days a week
HOLD: 1 second

Begin in sitting. Slouch at your low back, extend your leg out, and bring your head down. Slowly rock your foot/ankle back and forth (flex and extend). DO NOT hold this stretch for longer than one second when the toes are pointing towards you. This stretch is for the sciatic nerve which runs from your back to your toes. Repeat on both sides.

Thoracic Stretches

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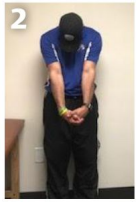
MID BACK (THORACIC) STRETCHES

FROM PRATIBHA BANSAL, MD FT. SAMMY IRACI III, PT OF FAMILY CARE PHYSICAL THERAPY

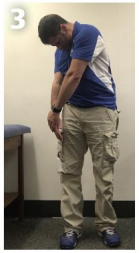
REPS: 5
HOLD: 10 seconds
7 days a week

Start on hands and knees. Keep the buttocks in line with the knees. Arch the back upwards like a camels hump (picture 1) and bend the head down. Hold for 10 seconds.
After completion, lift the head back up and arch the back like a cat (picture 2) and hold for 10 seconds.
Repeat process 5 times.



REPS: 5
HOLD: 15 seconds
7 days a week

In standing, reach towards the floor but try not to bend at the low back. Slowly bend your head downwards and pull shoulder blades apart by using the arms to pull the shoulders forward to stretch the middle of the back.



REPS: 5
HOLD: 15 seconds
7 days a week

Begin standing upright. Clasp your hands together and rotate to the Right. Keep your back straight, slowly bend your head down and pull your shoulder blades apart to stretch the middle of your back.
Perform on both sides.

REPS: 5
HOLD: 15 seconds
7 days a week

Begin in standing.
Raise arms with elbows straight and lean towards the side until a stretch is felt at the side of the waist.
Perform on both sides.

Cervical Stretches

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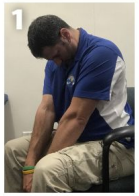
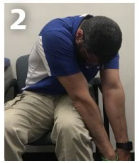
NECK (CERVICAL) STRETCHES

FROM **PRATIBHA BANSAL, MD** FT. **SAMMY IRACI III, PT** OF **FAMILY CARE PHYSICAL THERAPY**



REPS: 5
HOLD: 15 seconds
7 days a week

Begin sitting.
Reach towards the floor but try not to bend at the low back. Slowly bend your head downwards and pull shoulder blades apart by using the arms to pull the shoulders forward to stretch the middle of the back.

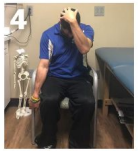


REPS: 5
HOLD: 15 seconds
7 days a week

Begin sitting in a chair. Reach towards the outside of your Left leg bending as far forward as you can. Slowly bend your head downwards to stretch the low and mid back. Perform on both sides.

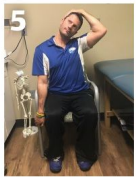
REPS: 5
HOLD: 15 seconds
7 days a week

Begin sitting in a chair. Rotate to the Left and use the Left hand to pull the Right shoulder towards the
Left in a rotating fashion until a stretch is felt at the shoulder blade and middle of the back. Perform on both sides.



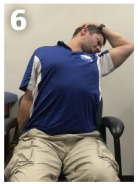
REPS: 5
HOLD: 15 seconds
7 days a week

Begin sitting in a chair. Hold onto the chair with one hand while the other hand pulls the head down until a stretch is felt in the neck and mid back between the shoulder blades.



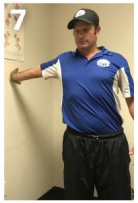
REPS: 5
HOLD: 15 seconds
7 days a week

Begin sitting in a chair. Hold onto the chair with one hand while the other hand pulls the head to the side until a stretch is felt in the side of the neck. Perform on both sides.



REPS: 5
HOLD: 15 seconds
7 days a week

Begin sitting in a chair. Grasp the bottom of the chair with the Right hand. Use the Left hand to pull head to the Left while extending backwards and slightly rotating body to the Left. Perform on both sides.



REPS: 30
HOLD: 1 second
7 days a week

Begin standing near a wall. Place your finger tips on the wall with your elbow fully extended. Slow lean your body towards the wall until your entire hand is flush with the wall.
DO NOT hold this stretch for longer than one second. After one second lean back away from the wall but always keep your finger tips touch. This stretch is for the median nerve which runs from your neck to hand. Repeat on both sides.

Lumbar Spine Exercises

Pratibha Bansal, MD
Nitin Bansal, MD

Pain Rehab of WNY

Lumbar Stretches

Thoracic Muscle Exercises

Pratibha Bansal, MD
Nitin Bansal, MD

Pain Rehab of WNY


WELLNESS

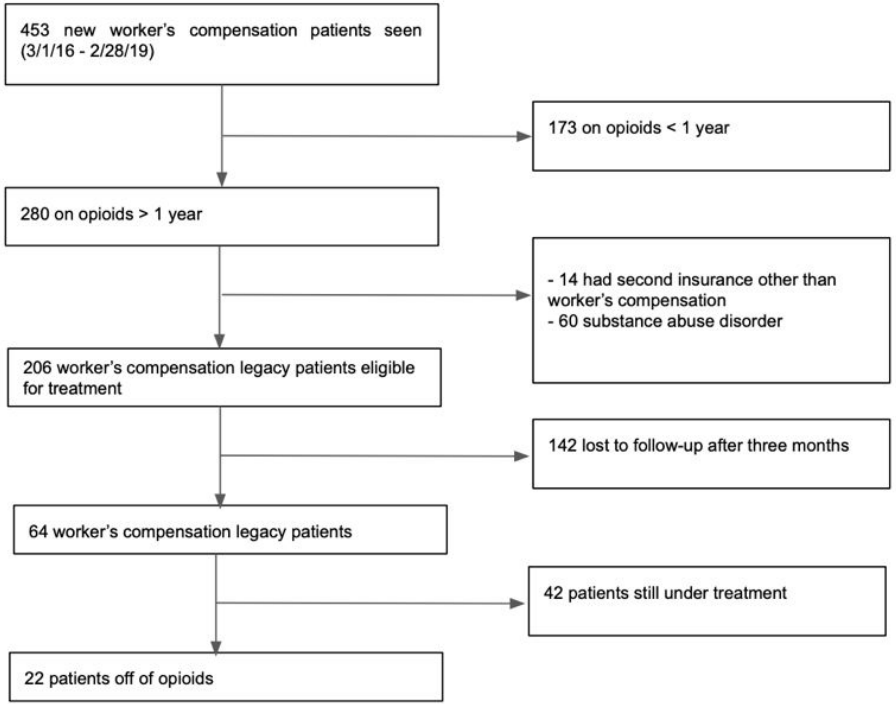
Cervical Spine Exercises

Pratibha Bansal, MD
Nitin Bansal, MD

Pain Rehab of WNY


WELLNESS

Patient Flow Chart



64 patients completed course of care and were included in analysis

Legacy Patients on opioid > 1 year

Patient Demographics

Male	25
Female	39
Caucasian	31
Black	28
Other	5

453 Total WCB Patients

Did not meet eligibility	389
In study	64

Site of Pain

Lumbar	30
Cervical	4
Other	4
2 diagnoses	26

Legacy Patients 64 wcb

Age started on opioids

Under 30	6
31-40	14
41-50	27
51-60	15
Over 60	2

Legacy Patients 64 patients

Years on opioids prior to being seen

> 30 years	1
20-29 years	5
10-19 years	19
6-9 years	13
1-5 years	26

Results

- Average morphine milligram equivalents decreased from 76.3mg to 21.0mg post treatment
- 84% of patients decreased their opioid dose
- 34% completely weaned off opioids

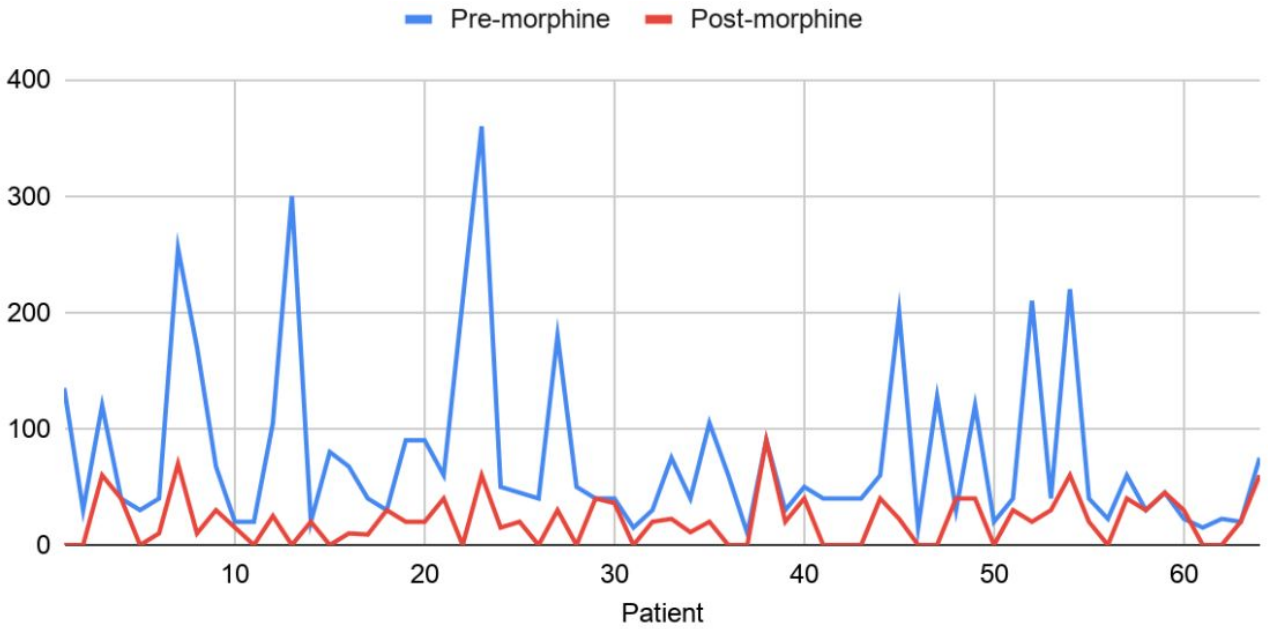


Figure 2: Individual Patient Morphine Milligram Equivalent Doses

Legacy Patients 64 wcb

64 patients characteristics prior to being seen

Characteristics prior to being seen

Physical Therapy	57
Chiropractic Care	39
Pain Physician	51
Surgeon	54
Surgery prior to being seen (WCB related)	46
Pre-exam exercise	35

Patient Symptoms and Medications

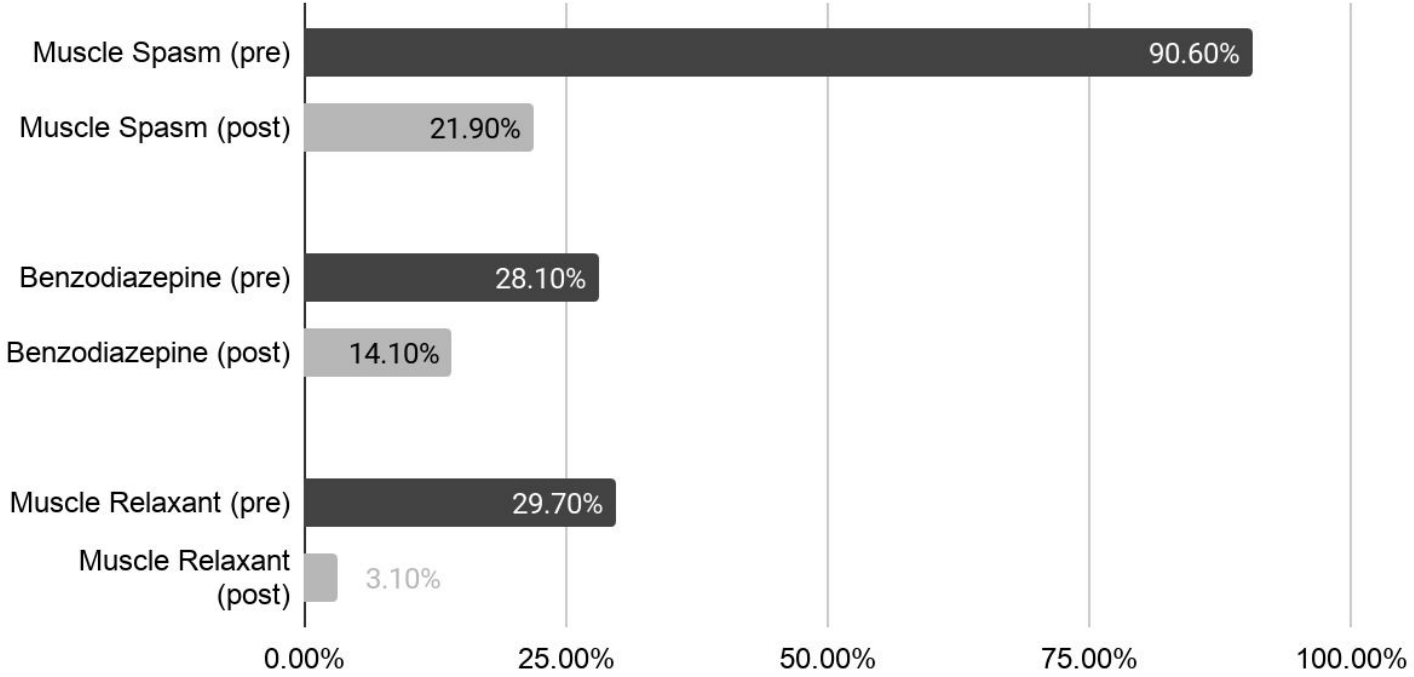


Figure 3: Bar graph of Pre and Post Treatment Symptoms and Medication Usage

Legacy Patients 64 WCB

- 20 had improvement in walking
- 25 had improvement in standing
- 25 had improvement with sitting
- 5 went back to work

Patient Demographics

- Average age was 54
- 59.6% of patients had been on opioids > 5 years
- 80% already received care with other pain providers and surgeons

Characteristics	Mean	SD
Age (year)	54.1	1.1
BMI (kg/m^2)	32.7	7.7

	Frequency	Percentage
Gender		
Male	25	39.1
Female	39	60.9
Ethnicity		
Caucasian	31	48.4
African American	28	43.8
Other	5	7.8
Prior Treatments		
Physical Therapy	57	89.1
Exercise	35	54.7
Surgery	46	71.9
Chiropractic Therapy	39	60.9
Pain Physician Care	51	79.7
Surgeon's Care	54	84.4
Years on Opioids		
1-5	26	40.6
6-9	13	20.3
10-19	19	29.7
20-29	5	7.8
≥ 30	1	1.6
Age Started on Opioids		
≤ 30	6	9.4
30-39	14	21.9
40-49	27	42.2
50-59	15	23.4
≥ 60	2	3.1

Results

- Pain and function scores slightly improved
- Muscle relaxant and benzodiazepine use significantly decreased
- Employment rate significantly increased from 14% to 22%
- Interventional procedure rate decreased from 72% to 25%
- Muscle spasm rate decreased

Outcome	Before Treatment	After Treatment	*p*-value
Daily Opioid Dose (Morphine Milligram Equivalent) Mean Median [interquartile range]	 76.3 42.5 [30.0-90.0]	 21.0 20.0 [3.0-34.5]	 < 0.001
Numeric Rating Scale of Pain Intensity Mean Median [interquartile range]	 7.0 7.5 [6.0-9.0]	 6.7 7.0 [5.0-8.0]	 0.122
Oswestry Disability Index Mean Median [interquartile range]	 30.4 31.0 [27.0-37.0]	 29.3 30.5 [23.5-37.5]	 0.181
Muscle Spasm	58 (90.6%)	14 (21.9%)	< 0.001
Adjuvant Use of Muscle Relaxant	19 (29.7%)	2 (3.1%)	< 0.001
Use of Benzodiazepine	18 (28.1%)	9 (14.1%)	< 0.001
Actively Employed	9 (14.0%)	14 (21.9%)	0.024
Interventional Pain Procedures	46 (71.8%)	16 (25.0%)	< 0.001

Conclusion

- Physician led structured stretching exercise program can improve the outcomes of "legacy pain" patients
  - Leads to a reduction in opioid and non-opioid adjuvant medication use
  - Improvement in pain symptoms, such as muscle spasms
  - Improvement in employment rate
  - Decrease in interventional procedure rate
  - Improvement in pain and function scores
- In our limited resource health care system, this is a simple and cheap intervention that can have a real impact on patient care

Legacy Patients (64 WCB)

- All the patients were started on a self directed home stretching exercise program to resolve the myofascial pain
- The patients are motivated to take control and regularly perform home exercise program that will address part of the pain
- Once pain starts to decrease the patients were encouraged to wean down the opiates at their own pace and other treatments for pain were initiated
  - 53 then underwent physical therapy
  - 16 had injections during treatment (48 had injections pre treatment)
  - 11 had surgery during treatment, 5 are scheduling surgery
  - 1 died of MI, 1 developed ALS and stopped working

Effect of a Structured Stretching Exercise Program on Resolution of Myofascial Pain and Opioid Usage in "Legacy Pain" Patients: A Retrospective Review

Weill Cornell Medicine | Pain Rehab of Western NY | regional anesthesia | acute pain | chronic pain medicine — ASRA Worldwide 2020, 19th Annual Pain Medicine Meeting, November 20-22, 2020

American Society of Regional Anesthesia and Pain Medicine: 19th Annual Pain Medicine Meeting

Prashant Rao MD[1], Nitin Bansal MD[1], Richard Blondell MD[2], Pratibha Bansal MD[2]

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Introduction

- Long term opioid therapy became the standard approach to managing chronic musculoskeletal pain in the late 1990's despite a lack of high-quality data on benefit and harm (1). The rising rates of deaths from opioid overdoses has led to new guidelines discouraging opioid prescriptions for chronic pain and has recommended tapering of opioid dosages (2).
- Unfortunately, there has been a large cohort of patients known as "legacy pain" patients who have been maintained on high doses of opioids for long periods of time. There is limited evidence regarding the treatment of these "legacy pain" patients with regards to reduction in pain, improvement in function and weaning down of opioids, and physicians are unclear of the best ways to manage these patients (3).
- Studies have demonstrated that a large portion of "legacy pain" patients suffer from a myofascial component to their pain (4-6). Myofascial pain is defined as pain that originates from myofascial trigger points in skeletal muscle (7,8). This type of pain is commonly thought to be treated well with non-opioid techniques such as exercise, physical therapy and other non-opioid pharmacologic therapies (9,10).
- The goal of this study was to determine specifically if a structured exercise stretching routine targeted at myofascial pain is effective in improving the outcomes of "legacy pain" patients.

Patients and Methods

- *Patients*: A retrospective review was conducted of "legacy pain" patients seen in a private community based interventional pain management practice in Buffalo, New York from 2016 to 2019. "Legacy pain" patients were defined as those taking opioids for greater than one year prior to their first appointment. The inclusion criteria for this study were patients who were greater than 18 years of age, were taking opioids for greater than one year, were on worker's compensation, and had a diagnosis of chronic pain. The study was restricted to worker's compensation patients in an attempt to further homogenize the cohort. Patients were excluded if they had substance use disorders due to future restrictions in prescribing opioids.
- *Intervention*: All patients were taught a structured stretching exercise program at their first appointment with a focus on areas of myofascial trigger points. The stretching program consisted of 14 lumbar, 4 thoracic, and 7 cervical stretches as appropriate. The patients were asked to hold these exercises to the point of stretch, not pain, for five repetitions of 15 seconds twice daily. Follow-up visits were planned within two weeks of initial consultation and monthly thereafter when possible. In addition to the stretching routine all patients were started in physical therapy. Non-opioid adjuvants (nonsteroidal anti-inflammatories, muscle relaxants, benzodiazepines, antidepressants, and anticonvulsants) and interventional pain treatments were continued, added or discontinued at provider's discretion. At the follow-up visits the exercise stretching routine was monitored and corrections were made. Patients also underwent a physical exam and monitoring of

Results

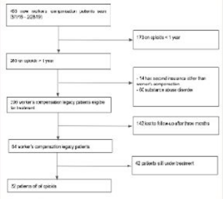

Figure 1. Patient selection flowchart

The review resulted in 453 new worker's compensation patients seen between March 2016 and February 2019. Of these patients, 204 met the full inclusion criteria of the study, and of this group, 64 (31.4%) patients proceeded with treatment and were included in analysis (Figure 1). The average age of the cohort was 54.1 years and 60.9% were female (Figure 2).

Characteristics	Mean	SD
Age (year)	54.1	8.1
BMI (kg/m²)	32.7	7.7
	Frequency	**Percentage**
Gender		
Male	25	39.1
Female	39	60.9
Ethnicity		
Caucasian	31	48.4
African American	28	43.8
Other	5	7.8
Prior Treatments		
Physical Therapy	57	89.1
Exercise	35	54.7
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< 30	6	9.4
30-39	14	21.9
40-49	27	42.2
50-59	15	23.4
≥ 60	2	3.1

Figure 2. Patient demographics and characteristics at initial evaluation (n=64)

Exercise techniques reduced MME intake on average from 76.3 mg to 21.0 mg daily (p < 0.001, Figure 2) with 84.4% of patients decreasing their total opioid dose (p < 0.001) and 34.4% of patients being completely weaned off of opioids (p < 0.001, Figure 3). This reduction of MME did not increase average NRS pain scores (average pretreatment NRS pain score of 7.0, average post treatment NRS pain score of 6.7, p = 0.122, Figure 4). Furthermore, reducing opioids with exercise techniques did not adversely affect patient function (average pretreatment ODI score of 30.4, average post treatment ODI score of 29.3, p = 0.181, Figure 4).

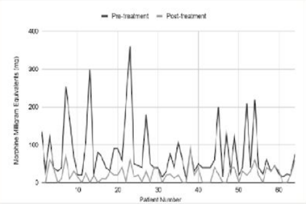

Figure 3. Morphine milligram equivalent (MME) pre- and post-treatment

Non-opioid exercise techniques decreased the incidence of muscle spasms (decreased from 90.6% to 21.9% post treatment, p < 0.001), intake of benzodiazepines (decreased from 28.1% to 14.1% of patients post treatment, p < 0.001) and usage of muscle relaxants (decreased from 29.7% to 3.1% of patients post treatment, p < 0.001, Figure 4). Body mass index did not significantly change in this cohort (p = 0.27), however, the number of patients who returned to work significantly increased from its original level of 14.0% to 21.9% post treatment (p = 0.024, Figure 4). Interventional procedure rates decreased from 71.8% of patients to 25.0% of patients during treatment (p < 0.001, Figure 4).

Outcome	Before Treatment	After Treatment	p-value
Daily Opioid Dose (Morphine Milligram Equivalent) Mean Median (interquartile range)	76.3 42.6 [30.0-90.0]	21.0 20.0 [5.0-34.8]	< 0.001
Numeric Rating Scale of Pain Intensity Mean Median (interquartile range)	7.0 7.5 [6.0-9.0]	6.7 7.0 [5.0-8.0]	0.122
Oswestry Disability Index Mean Median (interquartile range)	30.4 31.0 [27.5-37.0]	29.3 30.5 [23.5-37.5]	0.181
Muscle Spasm	58 (90.6%)	14 (21.9%)	< 0.001
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Use of Benzodiazepine	18 (28.1%)	9 (14.1%)	< 0.001
Actively Employed	9 (14.0%)	14 (21.9%)	0.024
Interventional Pain Procedures	46 (71.8%)	16 (25.0%)	< 0.001

Figure 4. Study outcome variables before and after institution of the structured exercise program

Discussion

- The results of this study demonstrate that integrating a structured exercise stretching program that focuses on the resolution of myofascial pain improves the outcomes of "legacy pain" patients. Patients in this study significantly reduced their daily opioid, muscle relaxant, and benzodiazepine use and had a significant decrease in pain symptoms, such as muscle spasms. Furthermore, reducing their medications did not adversely impact their NRS pain or ODI function scores, and instead trended towards improving these outcomes.
- The potential economic impact of the outcomes of this study cannot be overstated. Prior research has demonstrated that patients who are on high dose opioids are at higher risk of hospitalization, substance use disorder, and more frequent health care utilization (2,14,15). With the addition of a simple intervention such as stretching that focuses on myofascial pain, not only were opioid doses significantly reduced, but health care costs also decreased, as medication and interventional pain treatments were significantly reduced. Additionally, given the restriction to worker's compensation insurance in this study, the demographics of patients were significantly skewed towards initiation of long term opioid therapy prior to the age of sixty (96.9% of patients), of which only 14.0% of patients were employed at the initiation of treatment, and this improved to 21.9% of patients post-treatment. These results are corroborated by previous studies that have demonstrated that musculoskeletal pain is the most common reason for lost workdays (16). Thus, the addition of a structured exercise stretching regimen that focuses on myofascial pain is an inexpensive intervention that can have a positive impact on both patient outcomes and health care costs and utilization as a whole.
- One main limitation of this study is that there was a high initial drop-out rate, as only 31.4% of patients continued their course of care. The exercise-based philosophy for treatment of chronic pain was explained at the patient's first visit, and many patients dropped out early as they were skeptical that exercise could decrease their longstanding pain. Secondly, "legacy pain" patients had a high surgical rate, both related and unrelated to their worker's compensation chronic pain, which precluded 16 patients from completing the exercise program perioperatively. Another limitation of the study was that it was underpowered to elicit full statistical associations with only 64 patients being included in the analysis.
- *Conclusion*: The addition of a structured stretching exercise program focusing on the resolution of the myofascial pain in the treatment of "legacy pain" patients was shown to significantly reduce and often discontinue opioid use without adversely affecting pain score or functionality. It decreased the incidence of muscle spasms, intake of benzodiazepines and muscle relaxants and need for interventional pain treatments. Furthermore, a significant number of patients were able to return to work with an easily applicable intervention.

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Myofascial Pain

MYTH about TEACHING PATIENTS EXERCISE

1. Very time consuming, we do not have time to teach

2. I will send them to a physical therapist

   - Copays too expensive
   - 10-12 sessions per year allowed by insurance company

PATIENTS WILL NOT DO IT, THEY ONLY WANT PAIN PILLS

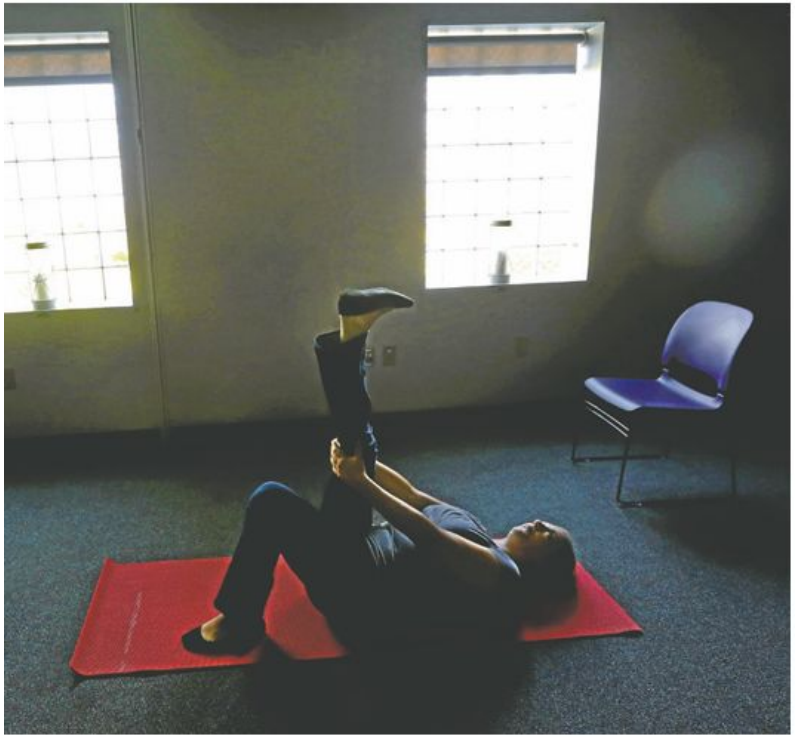

Skeletal

Medical Practitioner can easily teach exercises to the patient

- Good support system
- Easily able to explain to the patient
- It takes 1 minute to teach the exercises

- JC 34yr old (1982) First seen 5/2016. Hurt back 2005 LS surgery x2
- The pain in the back is constant it is a sharp, shooting, burning pain aggravated by walking, bending, coughing. It is relieved by resting lying down and medications. It radiates down the legs to the right and left ankle and is associated with tingling numbness in the toes. It is associated with weakness in the right and left leg trips on her right leg. No cane. There is muscle spasm in the back and leg and she does not exercise at home.
- PP 5 years - oxycodone er 20 mg bid,oxycodone 15 mg qid, diazepam 5 mg tid

- Stretching regimen and in 2 week follow up stated the leg cramps were better,
- TENS unit also prescribed.
- Physical Therapy
- Patient's off opioid in --7 months
- Result: She is off opioids, benzodiazepine, anticonvulsant
- Married, bought a house and is back to work full time.



ROBERT KIRKHAM, BUFFALO NEWS

Jessica Corcoran, of Lancaster, stretches at Pain Rehab of WNY in 2017. "I am still off all medications and continue to remain pain free thanks to practicing yoga," she says.

JC 34 yr old 1982

08/18/2017 10/16/2017 lyrica 25 mg capsule 120 30 Bansal, Pratibha
09/07/2016 01/30/2017 lyrica 225 mg capsule 60 30 Bansal, Pratibha
09/07/2016 01/04/2017 lyrica 225 mg capsule 60 30 Bansal, Pratibha
12/21/2016 12/22/2016 hydrocodone-acetaminophen
5-325 mg tablet 120 30 Bansal, Pratibha
12/21/2016 12/22/2016 tramadol hcl 50 mg tablet
120 30 Bansal, Pratibha
09/07/2016 12/01/2016 lyrica 225 mg capsule 60 30 Bansal, Pratibha
11/30/2016 12/01/2016 hydrocodone-acetaminophen
7.5-325 mg tablet 120 30 Bansal, Pratibha
11/02/2016 11/03/2016 oxycodone-acetaminophen
5-325 mg tab 120 30 Bansal, Pratibha
09/07/2016 11/02/2016 lyrica 225 mg capsule 60 30 Bansal, Pratibha
10/05/2016 10/06/2016 oxycodone-acetaminophen
5-325 mg tab 120 30 Bansal, Pratibha
09/07/2016 10/03/2016 lyrica 225 mg capsule
60 30 Bansal, Pratibha
09/07/2016 09/08/2016 oxycodone-acetaminophen
5-325 mg tab 120 30 Bansal, Pratibha
09/07/2016 09/08/2016 lyrica 225 mg capsule
60 30 Bansal, Pratibha
06/09/2016 09/07/2016 lyrica 225 mg capsule 60 30 Bansal, Pratibha
08/08/2016 08/08/2016 oxycodone-acetaminophen
7.5-325 mg tablet 120 30 Bansal, Pratibha
06/09/2016 08/08/2016 lyrica 225 mg capsule 60 30 Bansal, Pratibha
06/09/2016 07/08/2016 lyrica 225 mg capsule 60 30 Bansal, Pratibha
07/07/2016 07/08/2016 oxycodone-acetaminophen
10-325 mg tab 90 30 Bansal, Pratibha
06/15/2016 06/21/2016 oxycodone hcl er 10 mg tablet 60 20 Bansal, Pratibha
06/09/2016 06/13/2016 oxycodone-acetaminophen 10-325 mg tab 90 30 Bansal,
Pratibha MD
06/09/2016 06/13/2016 lyrica 225 mg capsule 60 30 Bansal, Pratibha MD
05/26/2016 05/29/2016 oxycodone hcl er 10 mg tablet 60 20 Bansal, Pratibha MD
05/22/2016 05/25/2016 lyrica 150 mg capsule 60 30 Bansal, Pratibha MD
04/26/2016 05/03/2016 oxycodone hcl er 20 mg tablet 90 30
04/26/2016 05/01/2016 oxycodone hcl er 20 mg tablet 9 30
04/22/2016 04/27/2016 oxycodone hcl 15 mg tablet 120 30
04/22/2016 04/25/2016 diazepam 5 mg tablet 90 30
03/09/2016 04/10/2016 lyrica 150 mg capsule 90 30

ML 56 yr old with back pain, shoulder, stasis ulcers 20 years

- The pain in the back 8/10 is not constant it is a aching pain aggravated by walking, bending, It radiates down the legs to the right ankle and is not associated with tingling numbness. It is associated with weakness in the right leg and it gives out. She uses a cane. muscle spasm in the back and leg and she does some exercise
- TENS unit was not tried.
- She has not had physical therapy , chiropractic treatments and injections. Psychological issues --anxiety sees a--psychologist.
- Had blood clots in the legs with ulcers--self care-wound care.
- on hydrocodone initially, switched to methadone 40 mg/ day for 15- 20 years

ML 56 yr old with back pain, shoulder, stasis ulcers 20 years

- Tx Treated with back exercises,
- biking with peddler bike to improve circulation
- Wound care
- Results: More active, off methadone, ulcers have healed
- Back to work
- Could walk on the sandy beach for the first time in 20 years

Search Terms: m l, 08/14/1966 Search Date: 01/03/2019
Sex: Female
Rx Written Rx Dispensed Drug Quantity Days Supply Prescriber Name
11/20/2018 12/03/2018 methadone hcl 5 mg tablet 30 30 Bansal, Pratibha
10/15/2018 10/30/2018 methadone hcl 5 mg tablet 30 30 Bansal, Pratibha
09/13/2018 09/20/2018 methadone hcl 5 mg tablet 30 30 Bansal, Pratibha
08/16/2018 08/20/2018 methadone hcl 5 mg tablet 60 30 Bansal, Pratibha
07/19/2018 07/20/2018 methadone hcl 5 mg tablet 60 30 Bansal, Pratibha
06/21/2018 06/22/2018 methadone hcl 5 mg tablet 60 30 Bansal, Pratibha
04/30/2018 05/15/2018 methadone hcl 10 mg tablet 60 30 Bansal, Pratibha
04/18/2018 04/20/2018 methadone hcl 5 mg tablet 50 17 Bansal, Pratibha
02/27/2018 03/01/2018 methadone hcl 5 mg tablet 90 30 Bansal, Pratibha
01/16/2018 01/16/2018 methadone hcl 5 mg tablet 90 30 Bansal, Pratibha
12/05/2017 12/07/2017 methadone hcl 5 mg tablet 90 30 Bansal, Pratibha
11/07/2017 11/07/2017 methadone hcl 5 mg tablet 90 30 Bansal, Pratibha

11/28/2016 11/29/2016 methadone hcl 10 mg tablet 120 30
10/27/2016 10/27/2016 methadone hcl 10 mg tablet 120 30
09/26/2016 09/27/2016 methadone hcl 10 mg tablet 120 30
08/23/2016 08/27/2016 methadone hcl 10 mg tablet 120 30

The longer the patient is inactive and longer on opioids, the gentler the starting exercise program

JM 32 Year Old

- Initial oxycodone age 18 after dental work
- on opioids , street drugs/ methadone since age 18 , back surgeries--2 numbness weakness in the legs
- Depressed, no PT, one epidural did not help
- pain practices SCS suggested could not pass MMPI test

JM 32 Year Old

- Exercises, PT
- Epidural injections, RF facet nerves
- depression better, wean down over all feels better
- Cleared MMPI, Permanent SCS placed
- Back to full time job
- Weaning off methadone went back to addiction medicine

Others' Prescriptions

Patient Name: J M Birth Date: 07/06/1986
1Sex: Female
Rx Written Rx Dispensed Drug Quantity Days Supply Prescriber Name Payment Method Dispenser
2020/02/10 2020/02/19 methadone hcl 10 mg tablet 75 25 Danzi, Bryan Insurance Walgreens #3288
2020/01/13 2020/01/22 methadone hcl 10 mg tablet 75 25 Danzi, Bryan Insurance Walgreens #3288
2019/12/02 2019/12/19 methadone hcl 10 mg tablet 84 28 Danzi, Bryan Insurance Walgreens #3288
2019/11/04 2019/11/19 methadone hcl 10 mg tablet 84 28 Azadfard, Mohammadreza Insurance Walgreens #3288
2019/10/07 2019/10/17 methadone hcl 10 mg tablet 84 28 Azadfard, Mohammadreza Insurance Walgreens #3288
2019/09/09 2019/09/13 methadone hcl 10 mg tablet 90 30 Danzi, Bryan Insurance Walgreens #3288
2019/08/12 2019/08/15 methadone hcl 10 mg tablet 84 28 Azadfard, Mohammadreza Insurance Walgreens #3288
2019/07/15 2019/07/15 methadone hcl 10 mg tablet 90 30 Azadfard, Mohammadreza Insurance Walgreens #3288
2018/09/06 2019/07/10 blue capsules 5mg thc and less than 0.5 mg cbd/capsule 60ct 1 30 Dzielski, Deborah L Cash Terradiol Ny - Buffalo
2019/06/27 2019/07/03 methadone hcl 10 mg tablet 36 12 Azadfard, Mohammadreza Insurance Walgreens #3288
2018/09/06 2019/07/02 green extra strength capsules 9.5 mg thc and 9.5 mg cbd/cap 1 15 Dzielski, Deborah L Cash Pharmacann Llc-Amherst
2018/09/06 2019/06/22 green 5mg thc and 5mg cbd/capsule 1 20 Dzielski, Deborah L Cash Terradiol Ny - Buffalo
2018/09/06 2019/06/22 blue extra strength capsules 9.5 mg thc and <0.5 mg cbd/cap 1 20 Dzielski, Deborah L Cash Terradiol Ny - Buffalo
2019/06/05 2019/06/06 methadone hcl 10 mg tablet 81 27 Mcmorrow, Robert P Insurance Walgreens #3288
2018/09/06 2019/05/30 blue capsules 5mg thc and less than 0.5 mg cbd/capsule 60ct 1 30 Dzielski, Deborah L Cash Terradiol Ny - Buffalo
2019/05/06 2019/05/07 methadone hcl 10 mg tablet 90 30 Mcmorrow, Robert P Insurance Walgreens #3288
2018/09/06 2019/05/06 blue capsules 5mg thc and less than 0.5 mg cbd/capsule 60ct 1 15 Dzielski, Deborah L Cash Pharmacann Llc-Amherst
2018/09/06 2019/04/15 blue capsules 5mg thc and less than 0.5 mg cbd/capsule 60ct 1 15 Dzielski, Deborah L Cash Pharmacann Llc-Amherst
2018/09/06 2019/04/15 blue extra strength capsules 9.5 mg thc and <0.5 mg cbd/cap 1 15 Dzielski, Deborah L Cash Pharmacann Llc-Amherst
2019/04/08 2019/04/08 methadone hcl 10 mg tablet 70 28 Mcmorrow, Robert P Insurance Walgreens #3288
2018/09/06 2019/03/25 blue capsules 5mg thc and less than 0.5 mg cbd/capsule 60ct 1 15 Dzielski, Deborah L Cash Pharmacann Llc-Amherst
2018/09/06 2019/03/25 blue extra strength capsules 9.5 mg thc and <0.5 mg cbd/cap 1 15 Dzielski, Deborah L Cash Pharmacann Llc-Amherst
2019/03/11 2019/03/11 methadone hcl 10 mg tablet 56 28 Mcmorrow, Robert P Insurance Walgreens #3288

SP May 2018

- 67 year old, 3/23/83 injury to neck and back --crush injury to testicles10-12 surgeries--
- Morphine 300 mg/day acupuncture q 2 weeks groggy, bedridden 20 years
- Tx exercise program, physical therapy, lyrica
- Results In 3 months off opioid walks 20 miles/ week took 1st vacation, started driving, take his wife out for dinner

SP 67

8/8/18--off opioids-walks 20 miles/ week, doing exercises at home , went for PT, will start driving

07/31/2018 lyrica 75 mg capsule 120

07/28/2018 flurazepam 30 mg 30

07/25/2018 morphine sulfate ir 15 120

06/29/2018 morphine sulf er 15 mg 120

06/16/2018 morphine sulf er 30 mg tablet 60

05/31/2018 lyrica 75 mg capsule 60

morphine sulf er 60 mg tablet 50, First Visit

05/10/2018 morphine sulf er 100 mg tablet 90 30

04/26/2018 04/28/2018 flurazepam 30 mg capsule 90 90

04/05/2018 04/10/2018 morphine sulf er 100 mg tablet 90 30

02/28/2018 03/10/2018 morphine sulf er 100 mg tablet 90 30

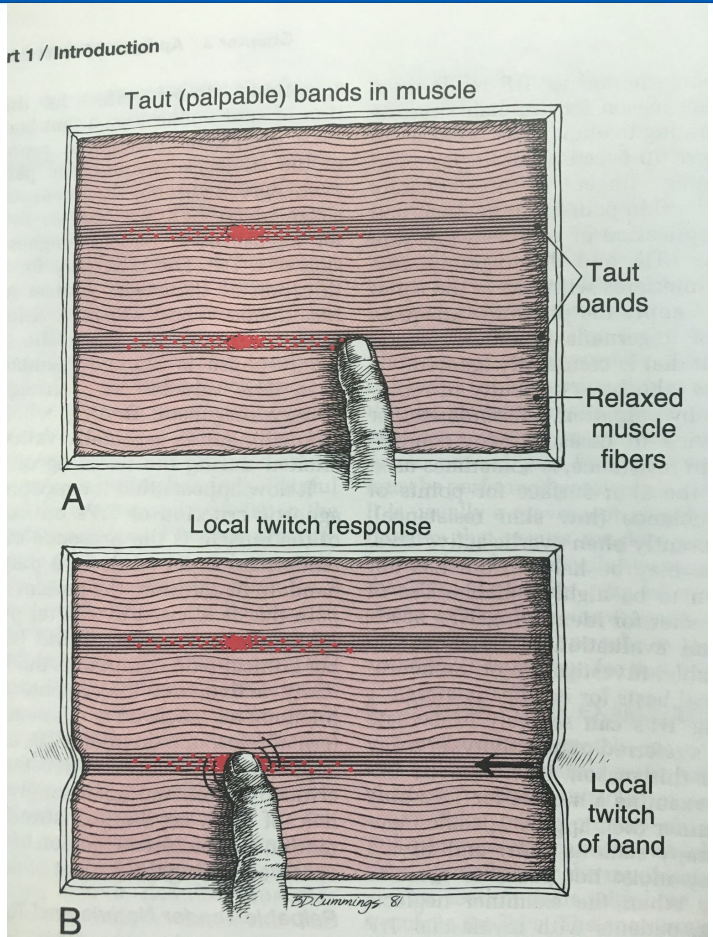
02/08/2018 02/08/2018 morphine sulf er 100 mg tablet 90 30

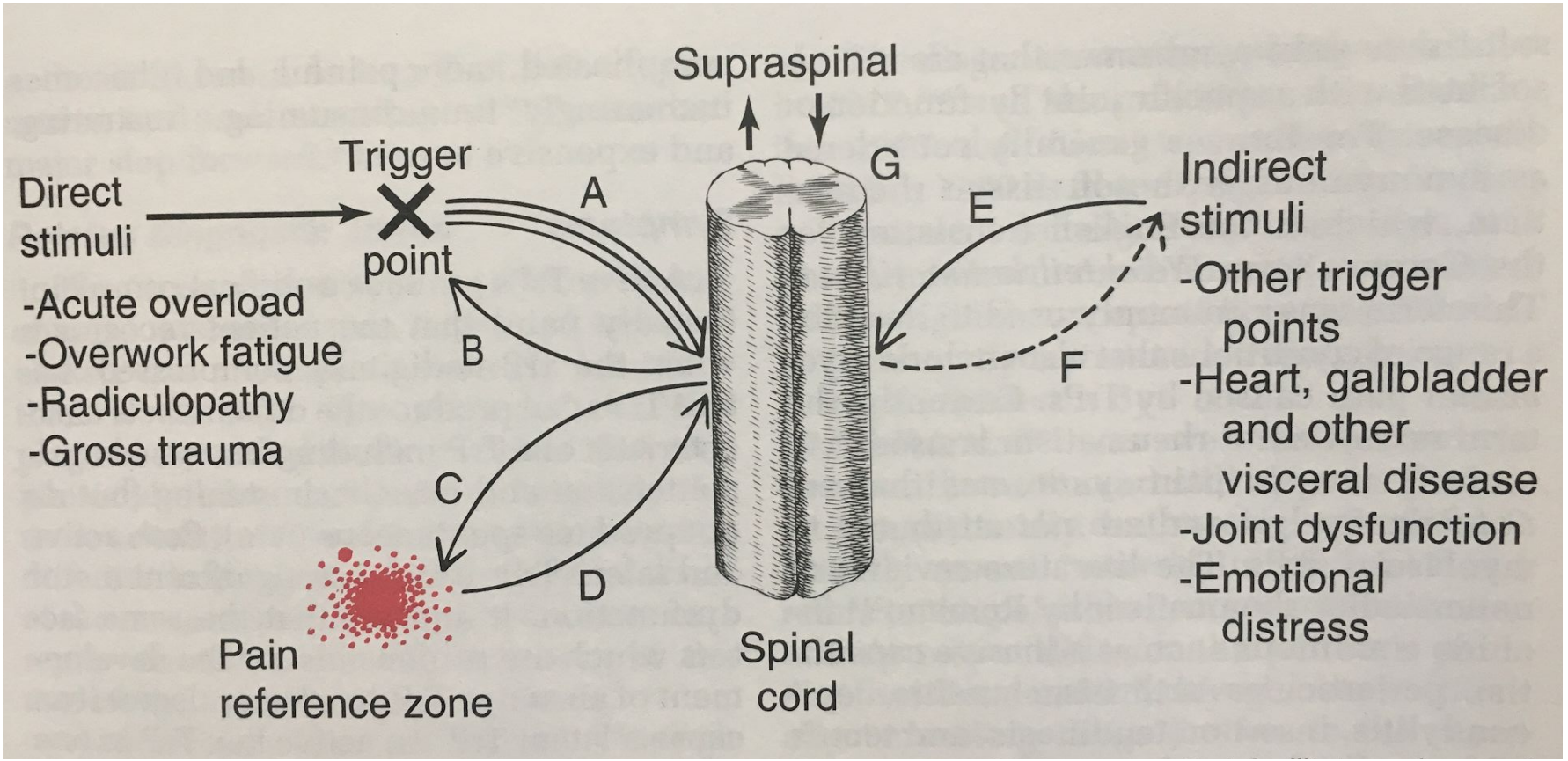
JOSHUA BESSEX, BUFFALO NEWS

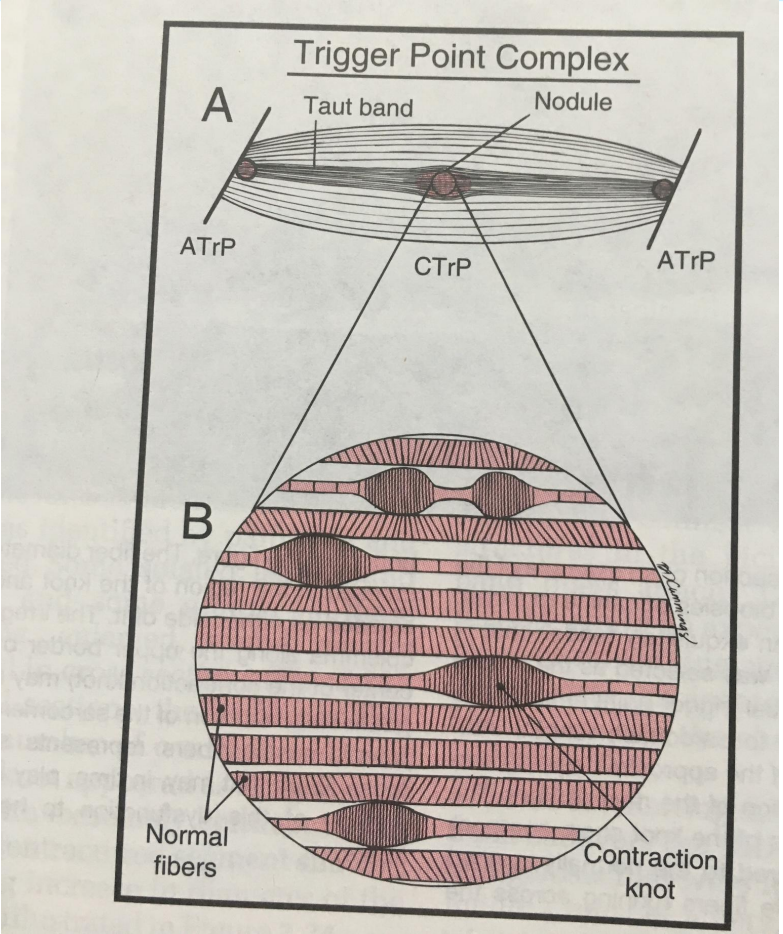
Sam Puma, right, walks alongside Bruce Crockett, left, and Frank Meredith, center, through Como Lake Park on Oct. 8. Puma was bedridden for more than 20 years before Dr. Pratibha Bansal weaned him off painkillers six years ago.

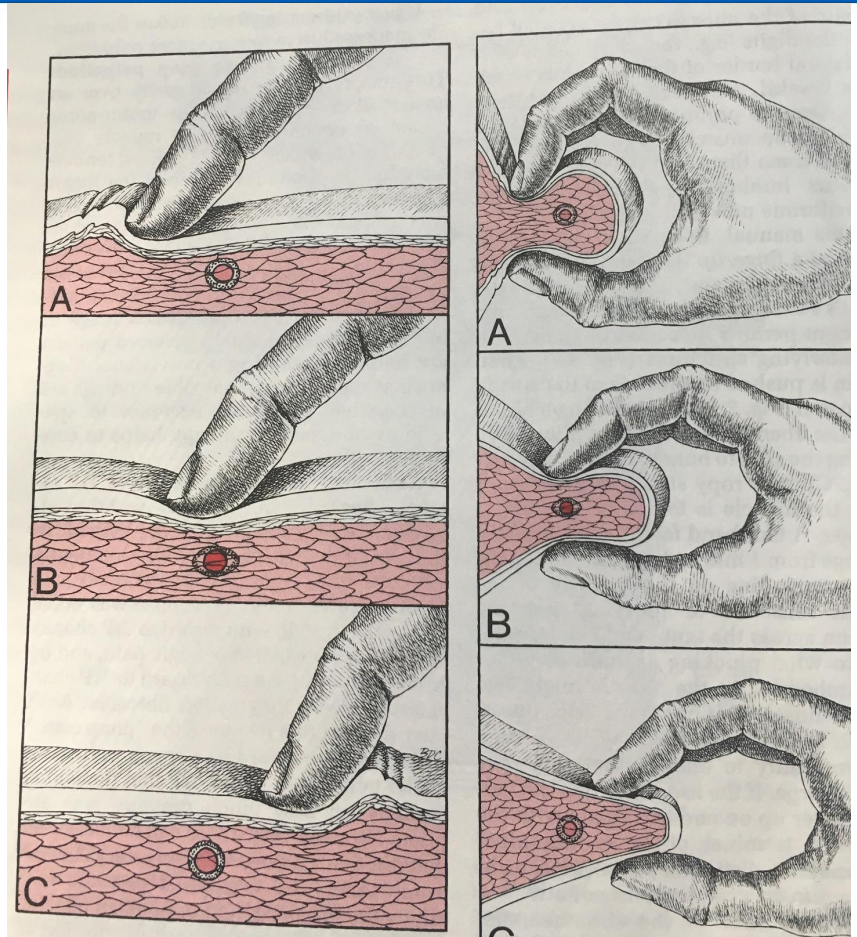
Need to give patient modalities to decrease pain

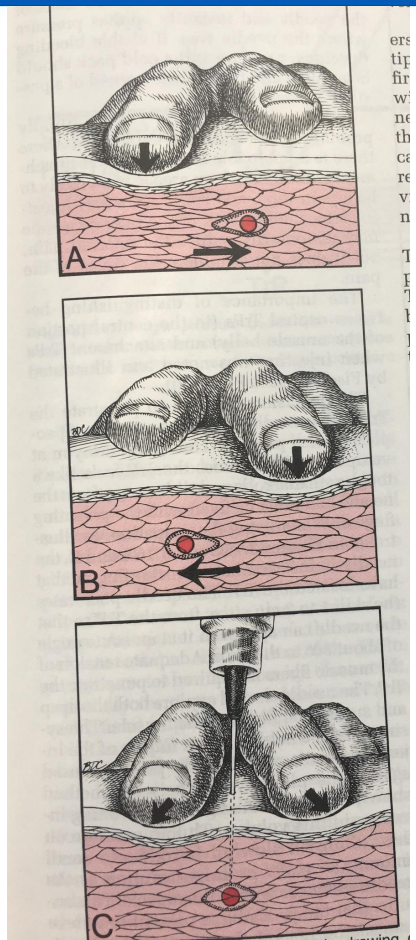
Control over weaning as their pain decreases


Taut (palpable) bands in muscle
Taut bands
Relaxed muscle fibers
A
Local twitch response
Local twitch of band
B

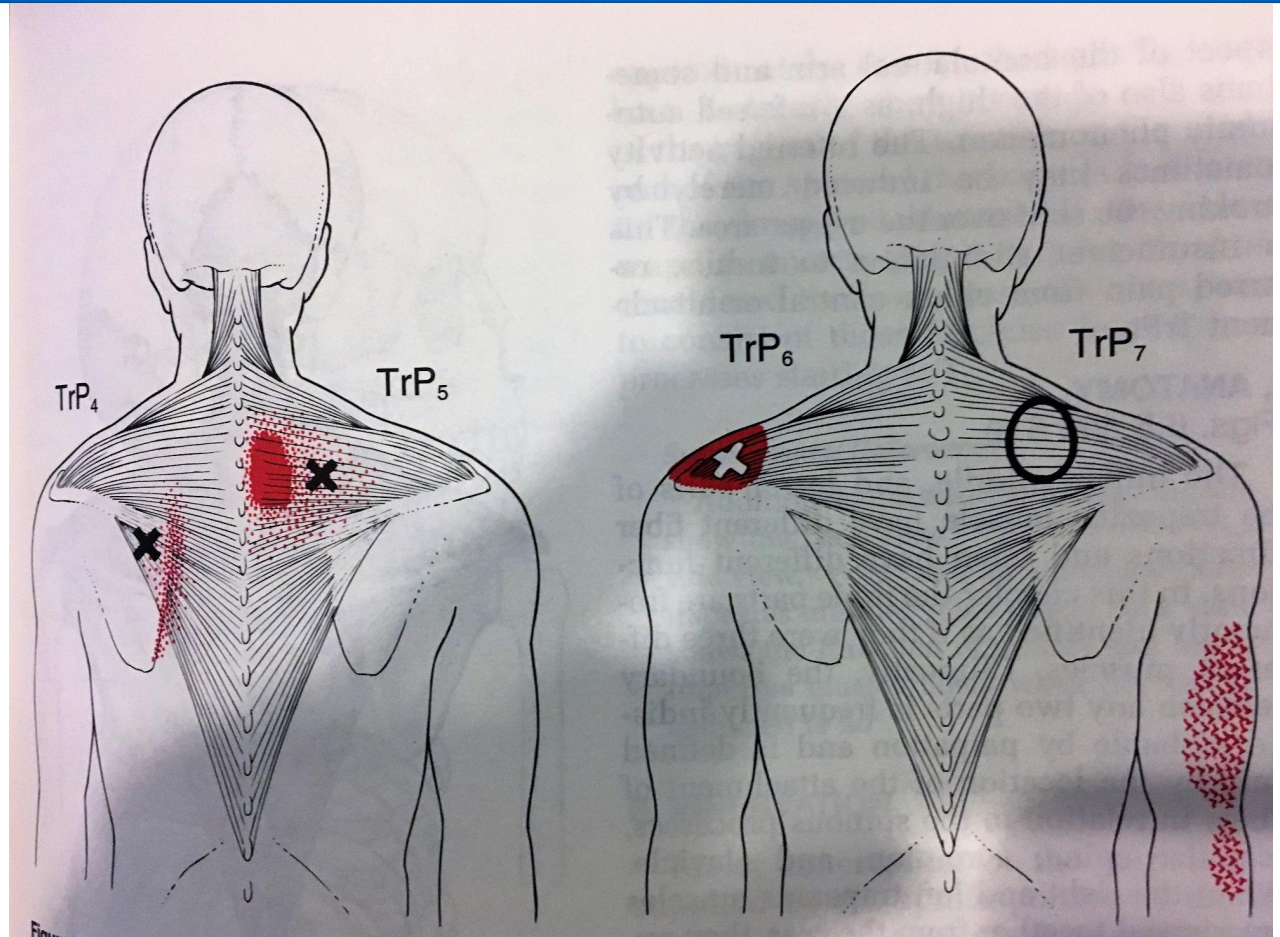

Supraspinal
Trigger
point
Direct
stimuli
-Acute overload
-Overwork fatigue
-Radiculopathy
-Gross trauma
A
B
C
D
E
F
G
Indirect
stimuli
-Other trigger
points
-Heart, gallbladder
and other
visceral disease
-Joint dysfunction
-Emotional
distress
Pain
reference zone
Spinal
cord

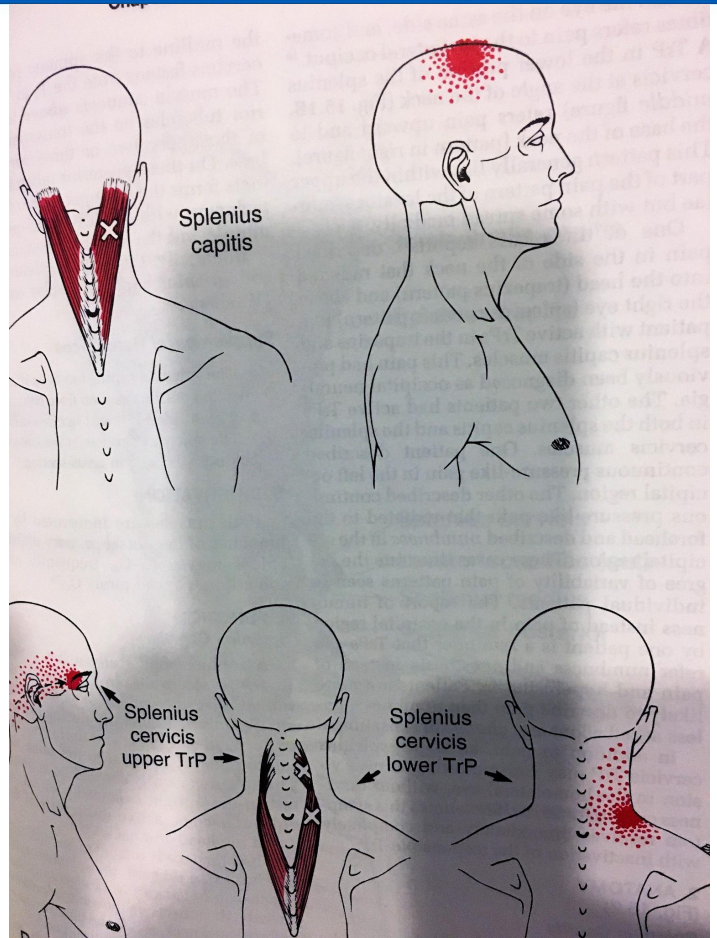

Trigger Point Complex
A
Taut band
Nodule
ATrP
CTrP
ATrP
B
Normal fibers
Contraction knot

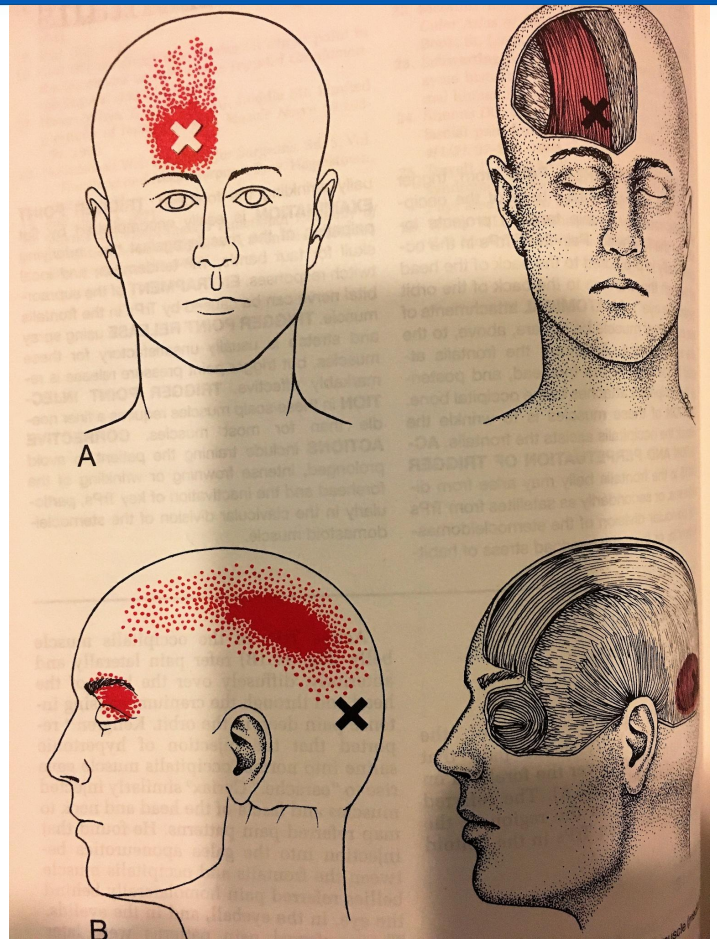

A
B
C
A
B

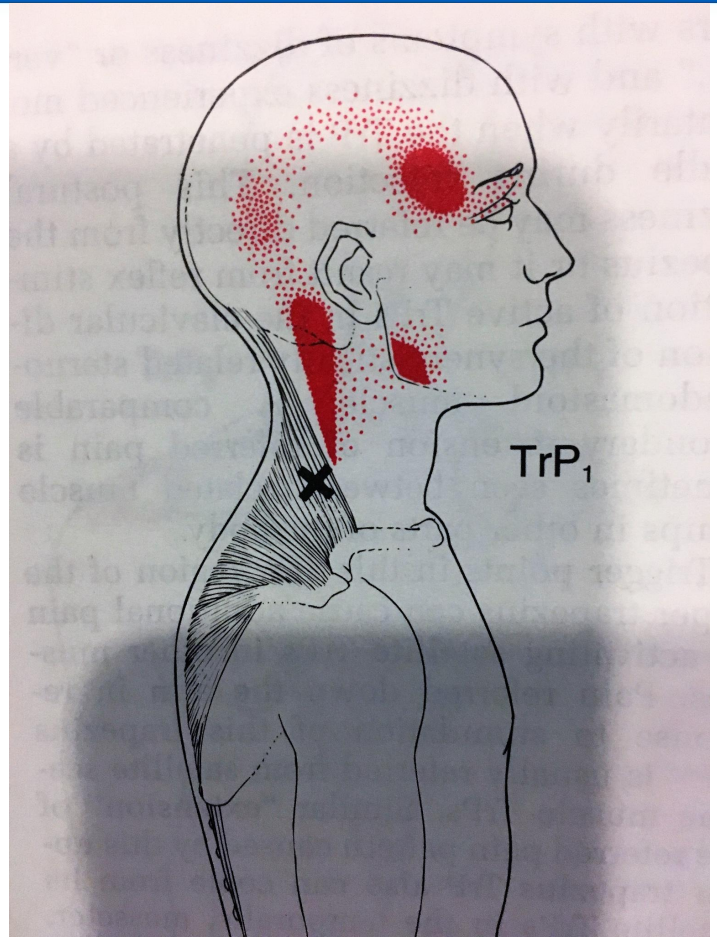

A
B
C

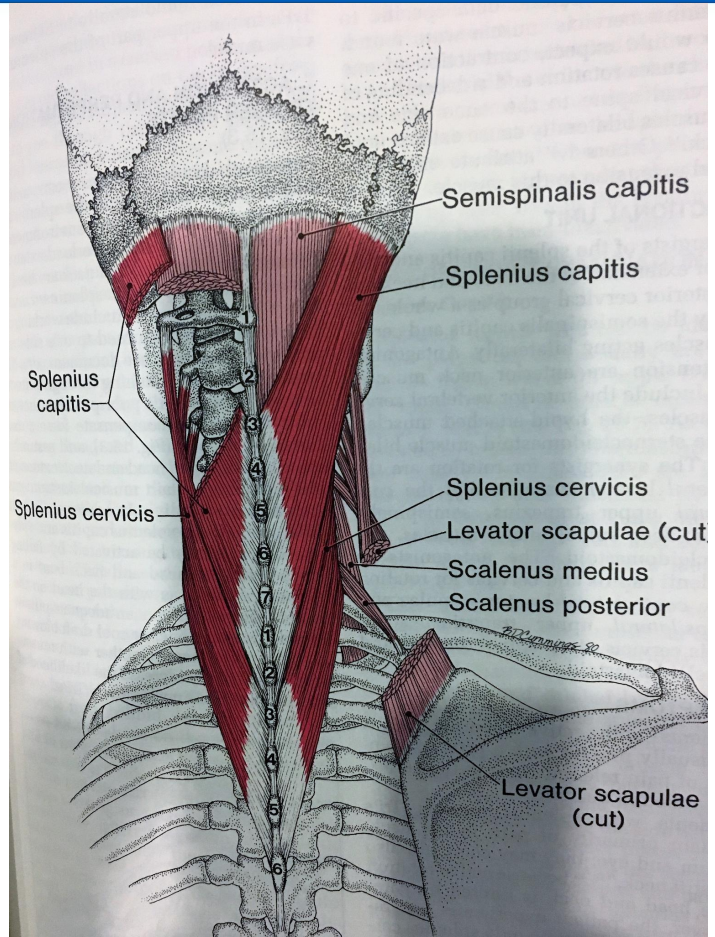
Opioids are not indicated for myofascial pain.

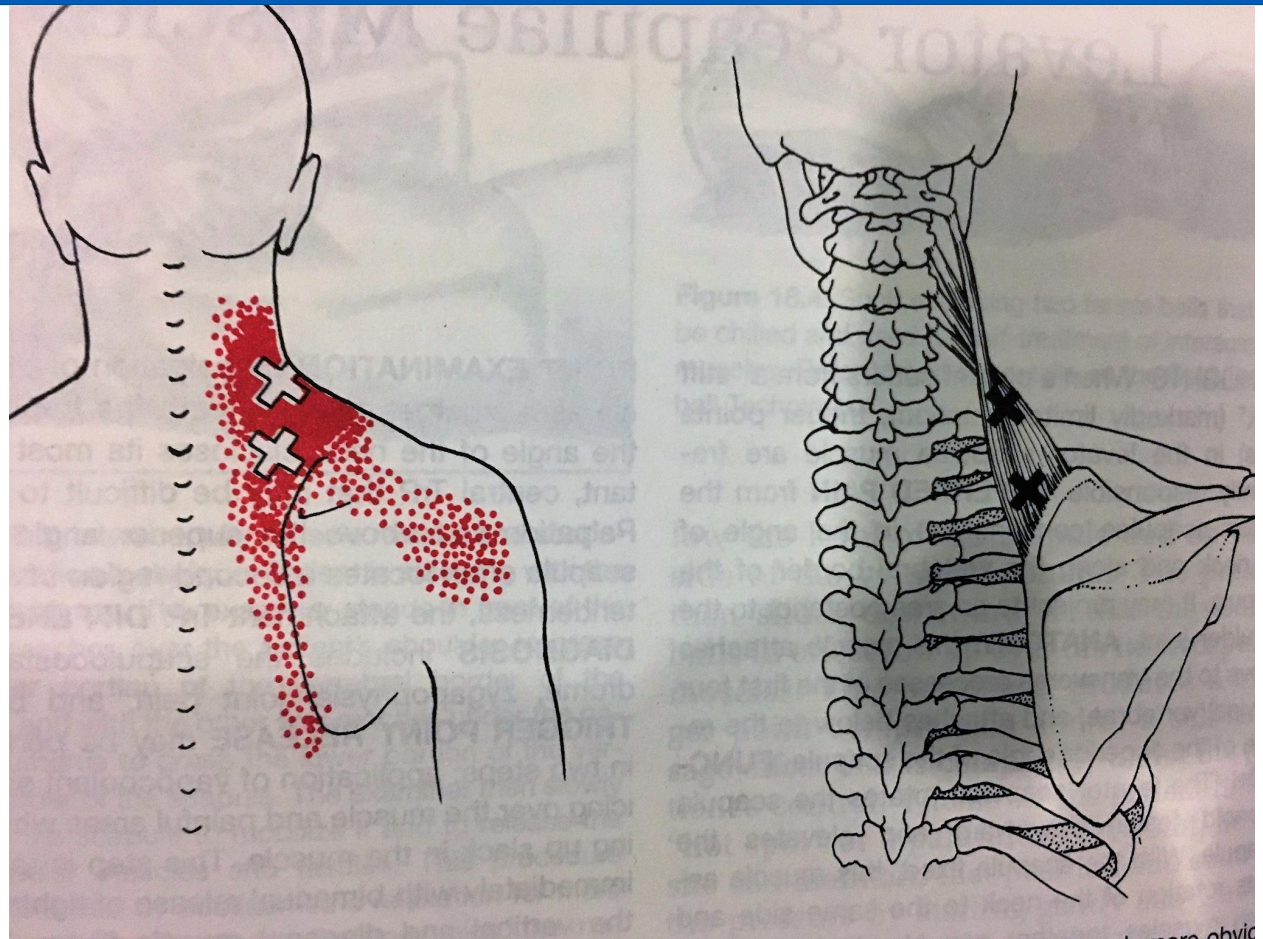

TrP4
TrP5
TrP6
TrP7

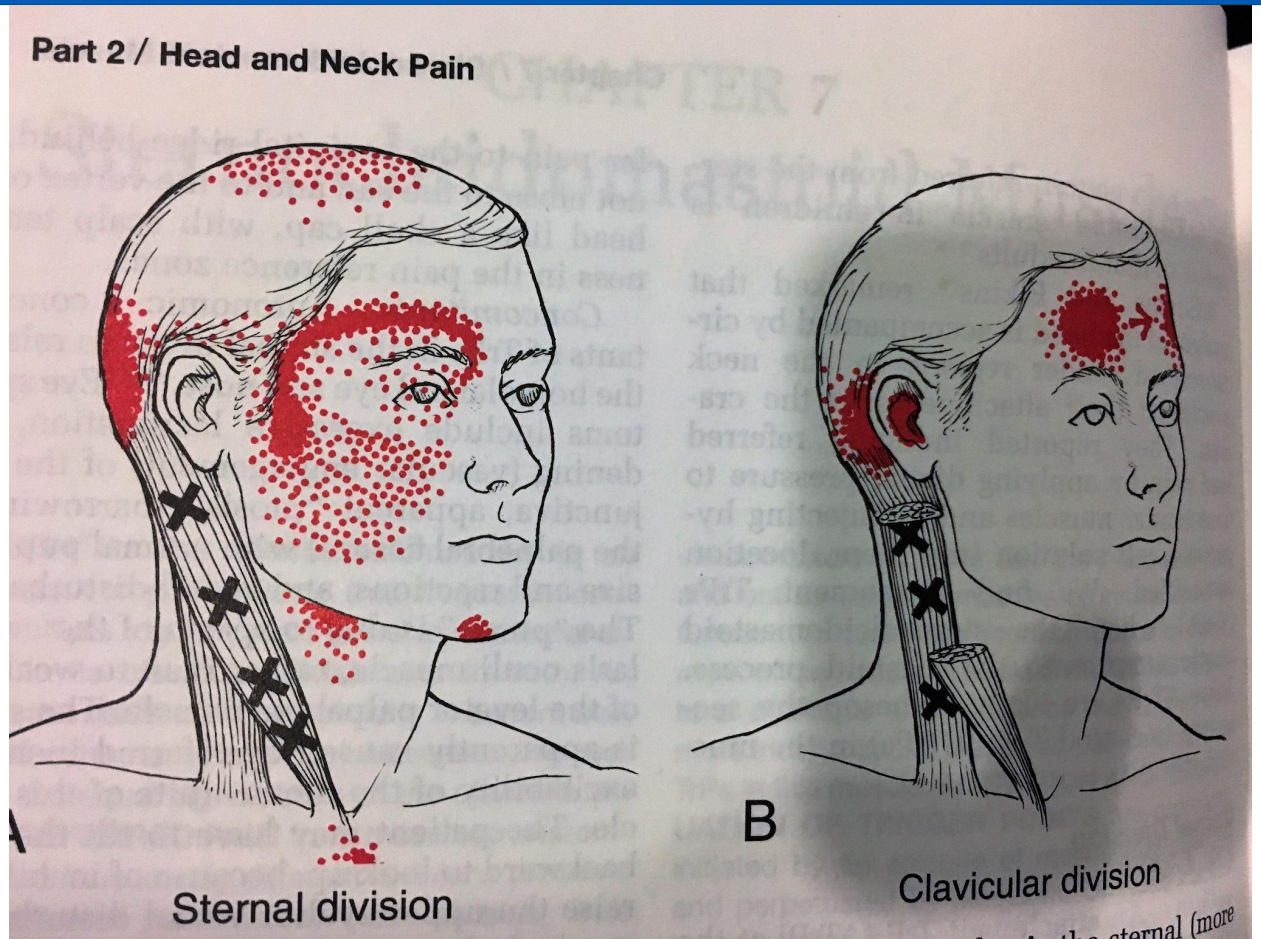

Splenius capitis
Splenius cervicis upper TrP
Splenius cervicis lower TrP

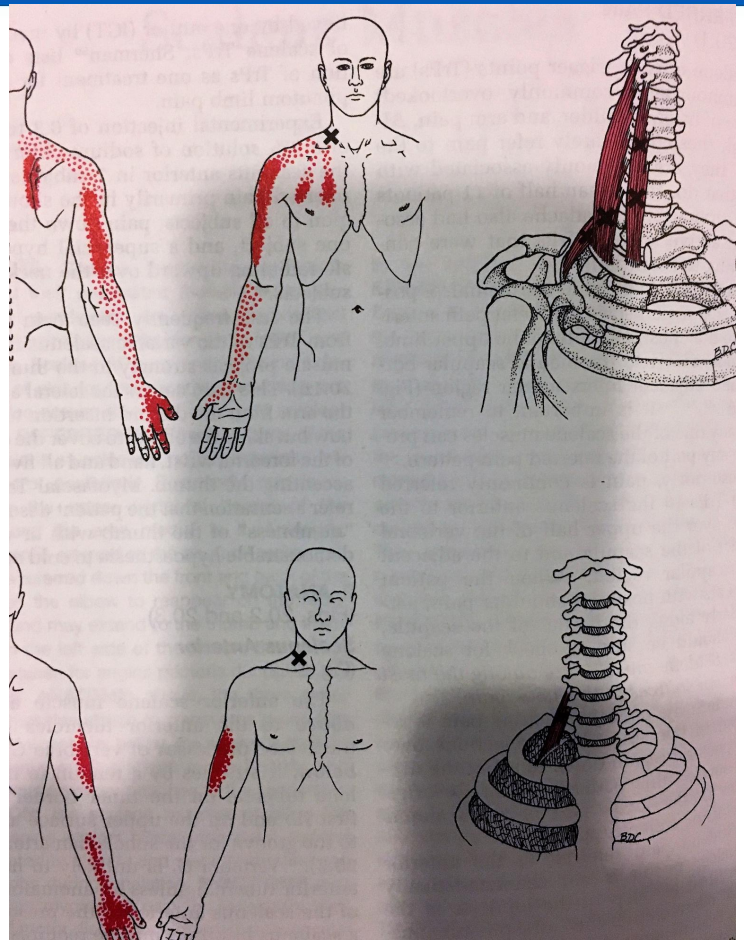

A
B

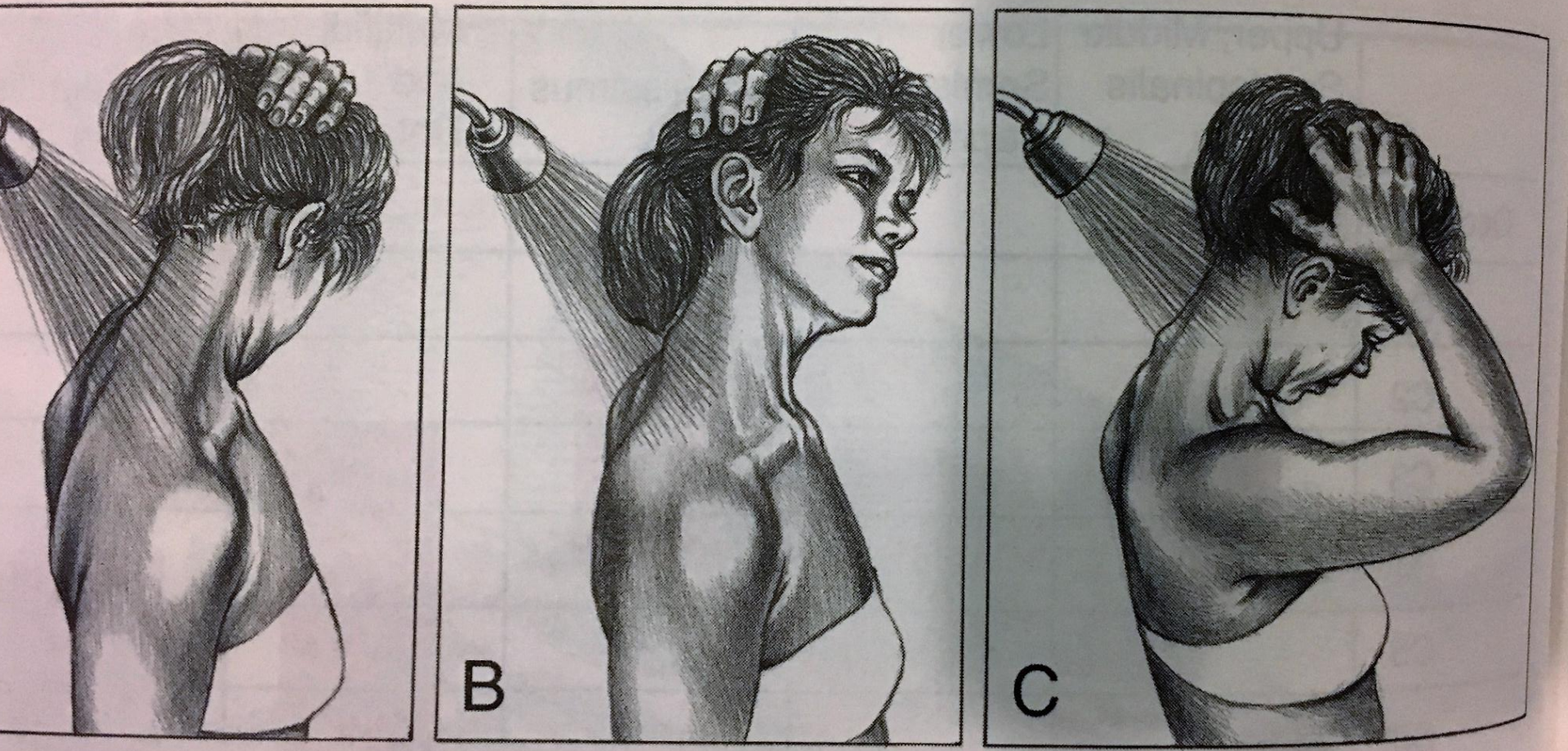

TrP1

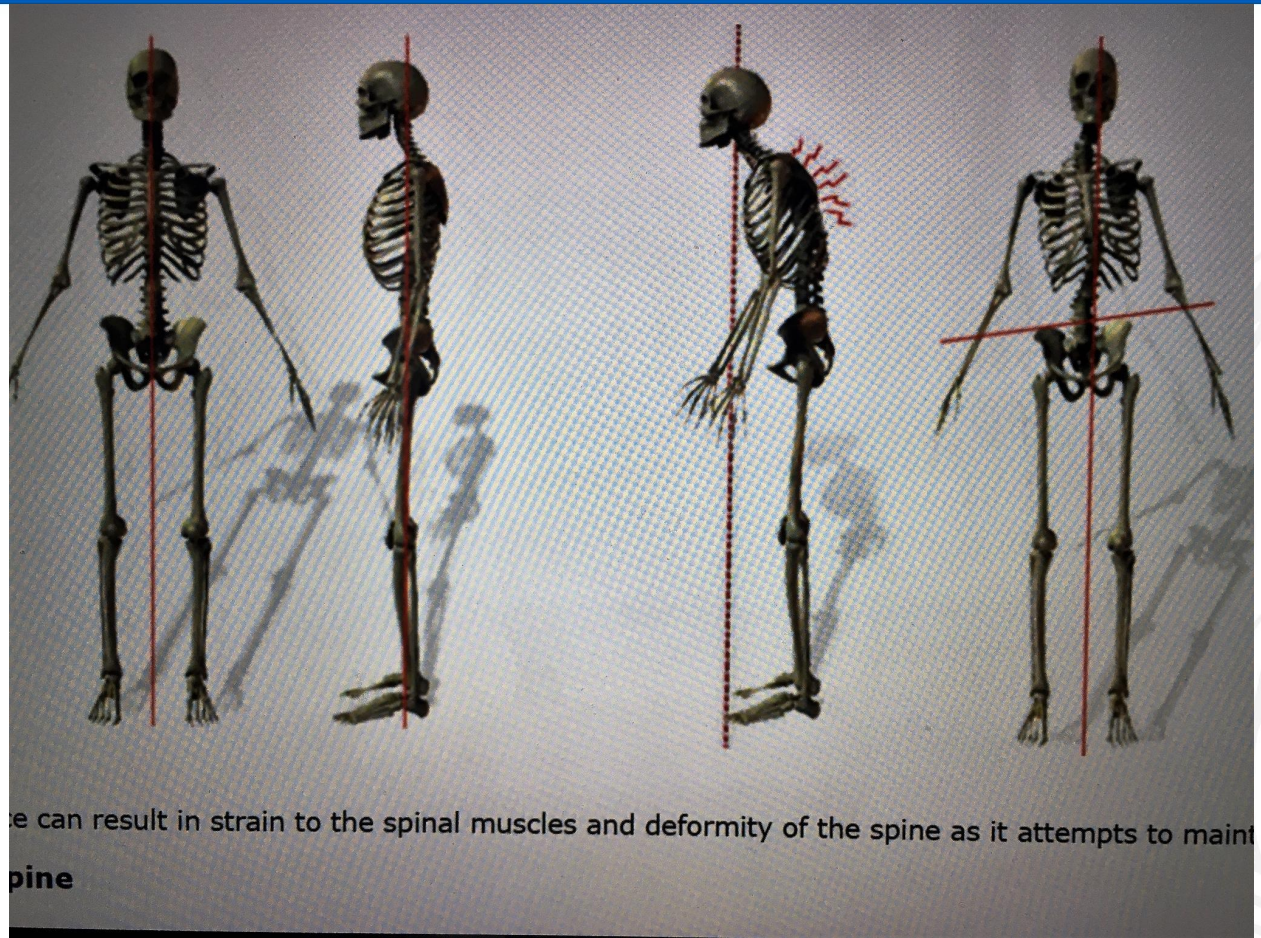

Semispinalis capitis
Splenius capitis
Splenius capitis
Splenius cervicis
Splenius cervicis
Levator scapulae (cut
Scalenus medius
Scalenus posterior
Levator scapulae (cut)
1
2
3
4
5
6
7
1
2
3
4
5
6




A
Sternal division
B
Clavicular division

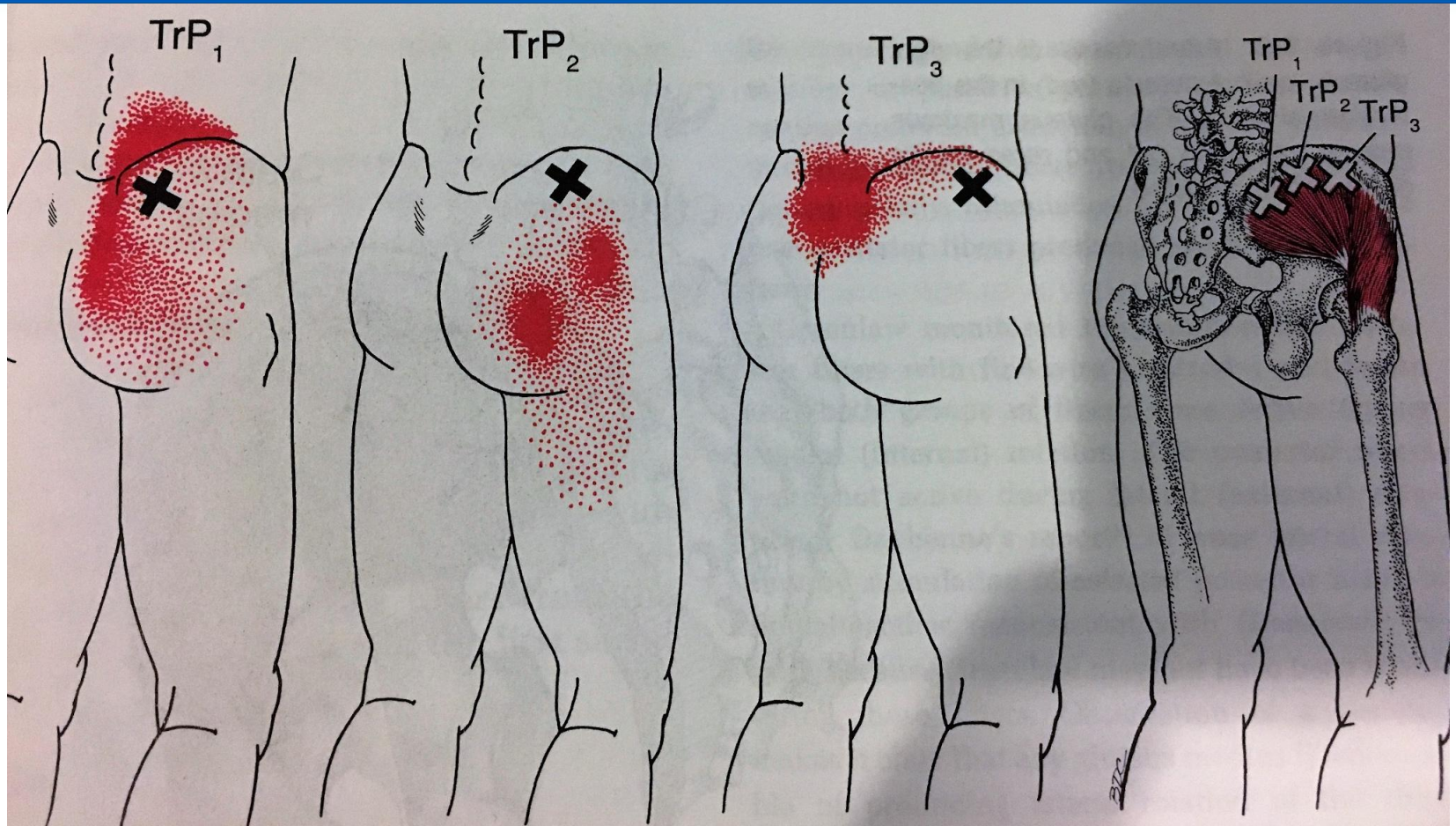


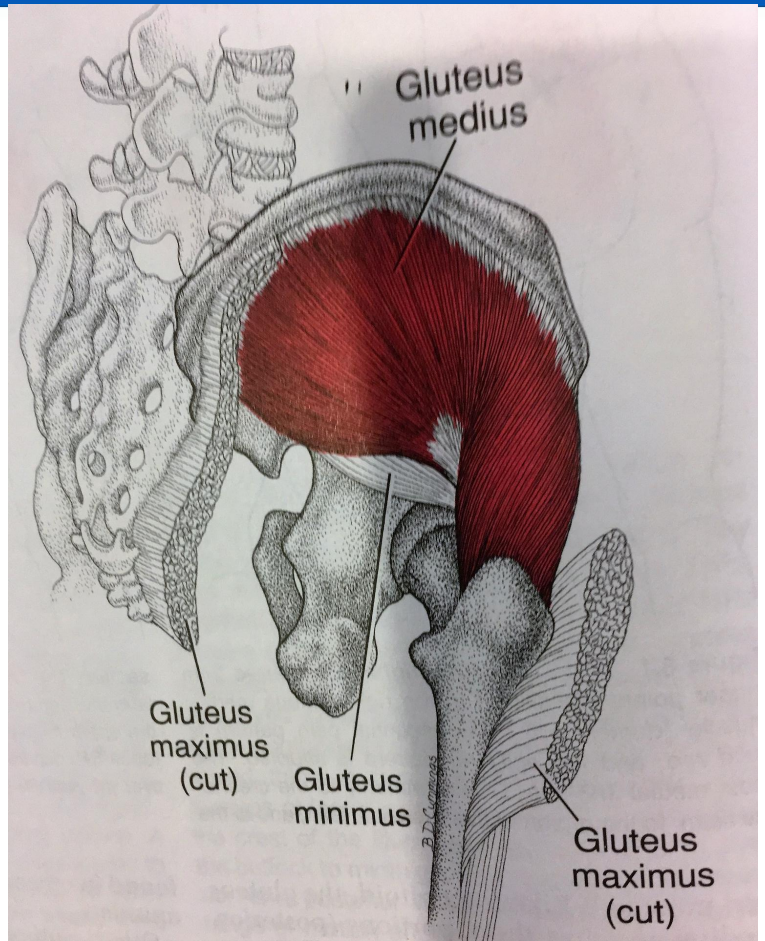

B
C

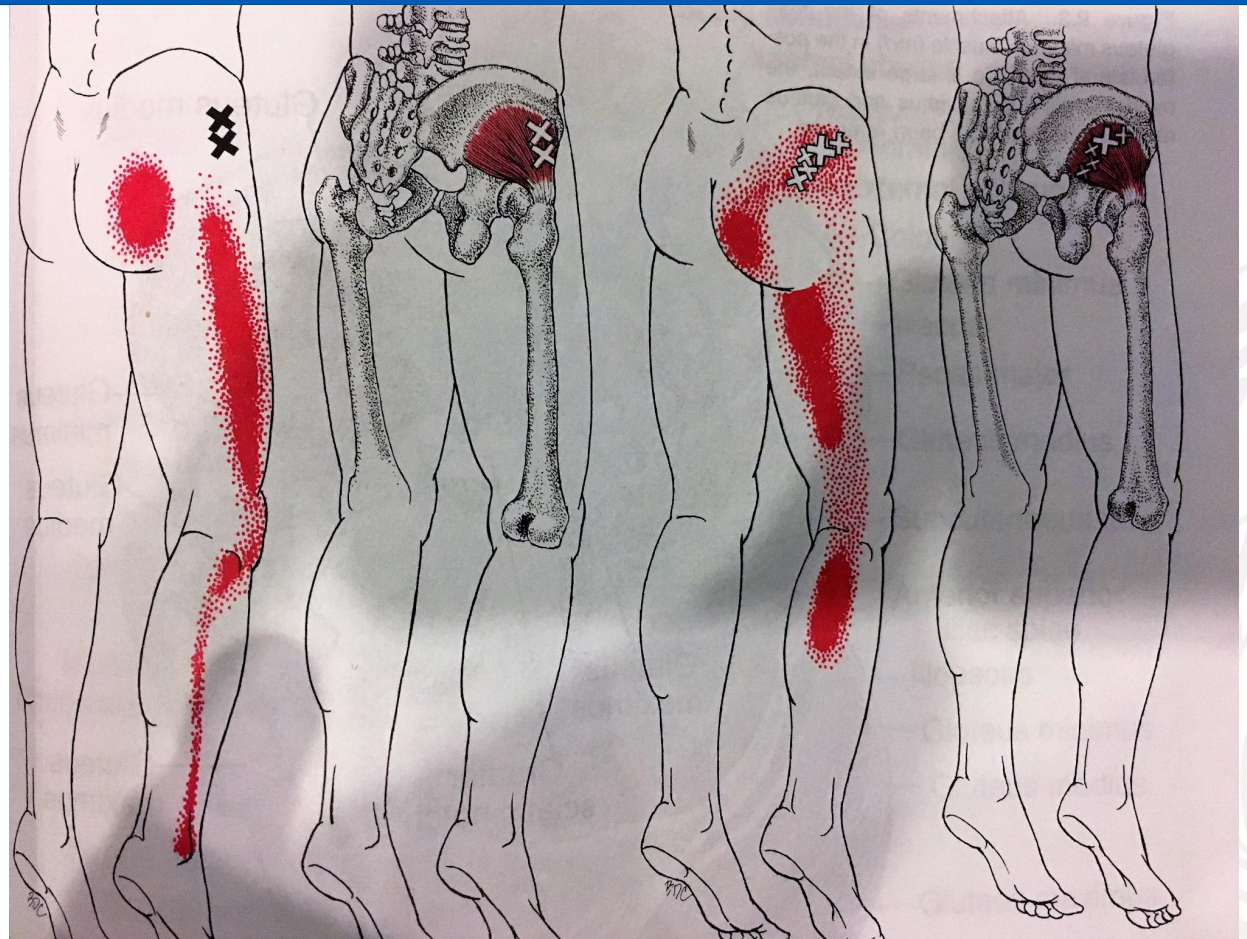


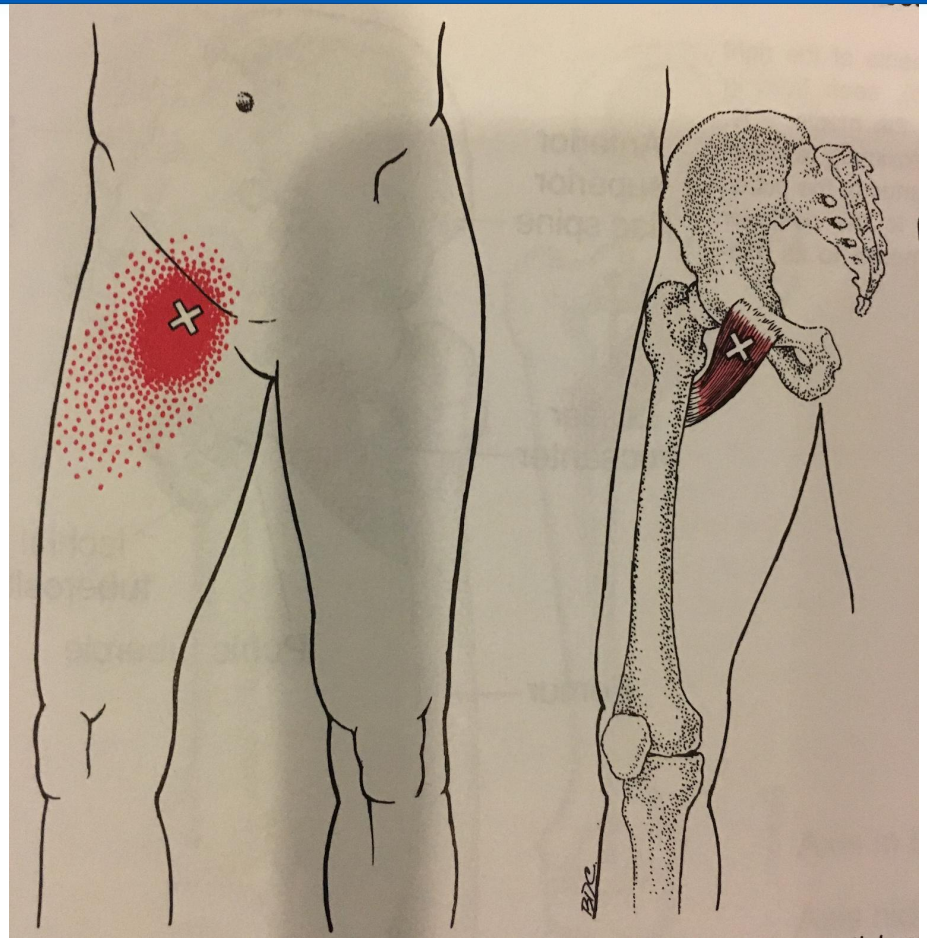
e can result in strain to the spinal muscles and deformity of the spine as it attempts to maint

pine


TrP1
TrP2
TrP3
TrP1
TrP2
TrP3


Gluteus medius
Gluteus maximus (cut)
Gluteus minimus
Gluteus maximus (cut)





Iliopsoas

Also known as the psoas muscle, the iliopsoas is actually a combination of two large muscles: the psoas major and the iliacus. The psoas major muscle originates in the lower back; the iliacus originates on the inside of the pelvis. Both muscles combine to form one tendon that attaches to the inside of the proximal femur bone.

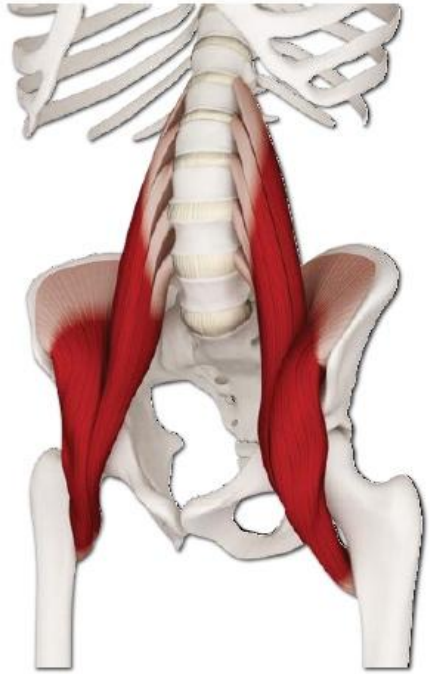
psoas major

iliacus

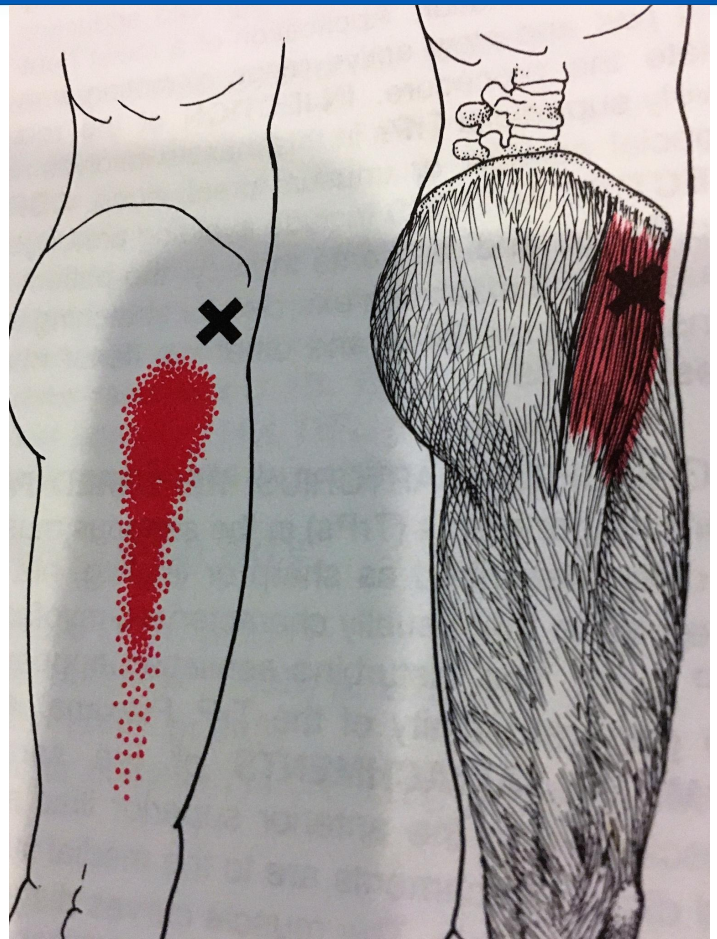
The iliopsoas is thus called polyarticular. This means that it crosses over (and moves) more than one joint. The iliopsoas also acts like a pulley as it curves over the front rim of the pelvis on its way to the femur. Like other pulley systems, this serves to multiply the force generated when the iliopsoas contracts. The iliopsoas thus moves the bones of the lower back, pelvis and hip in a coupled fashion. This means that when it contracts, a combination of movements across several joints is possible.

The iliopsoas first awakens during infancy when we are learning to sit up and then to walk. Once awakened, the iliopsoas becomes constantly active in activities such as standing and walking. In spite of this constant use, our awareness of the iliopsoas quickly becomes unconscious. (Imagine if we had to think every time we took a step!)

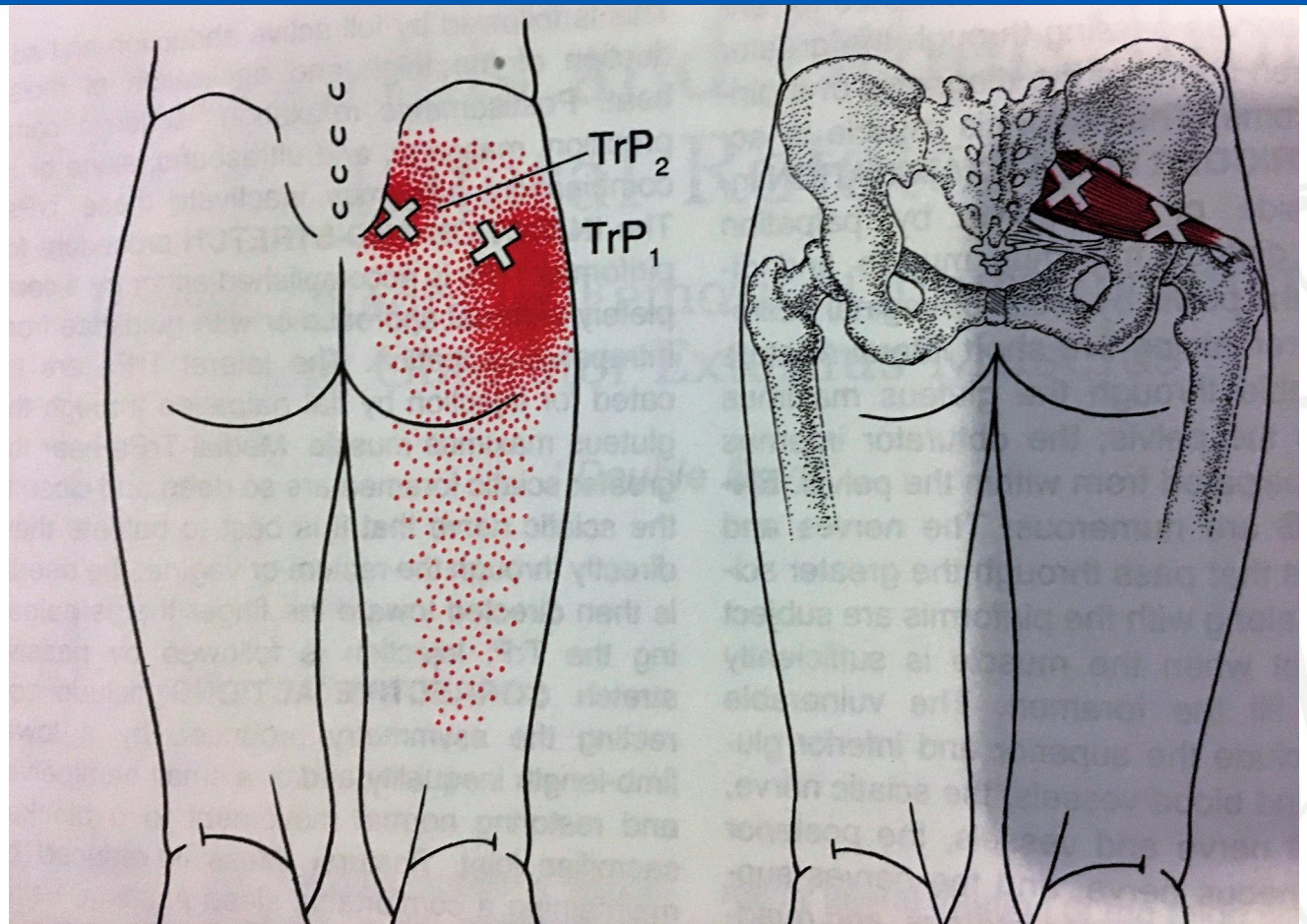
Hatha yoga can be used to reawaken our consciousness of this large and important muscle. Once you awaken the iliopsoas, contract or relax it to transform and deepen your asanas.

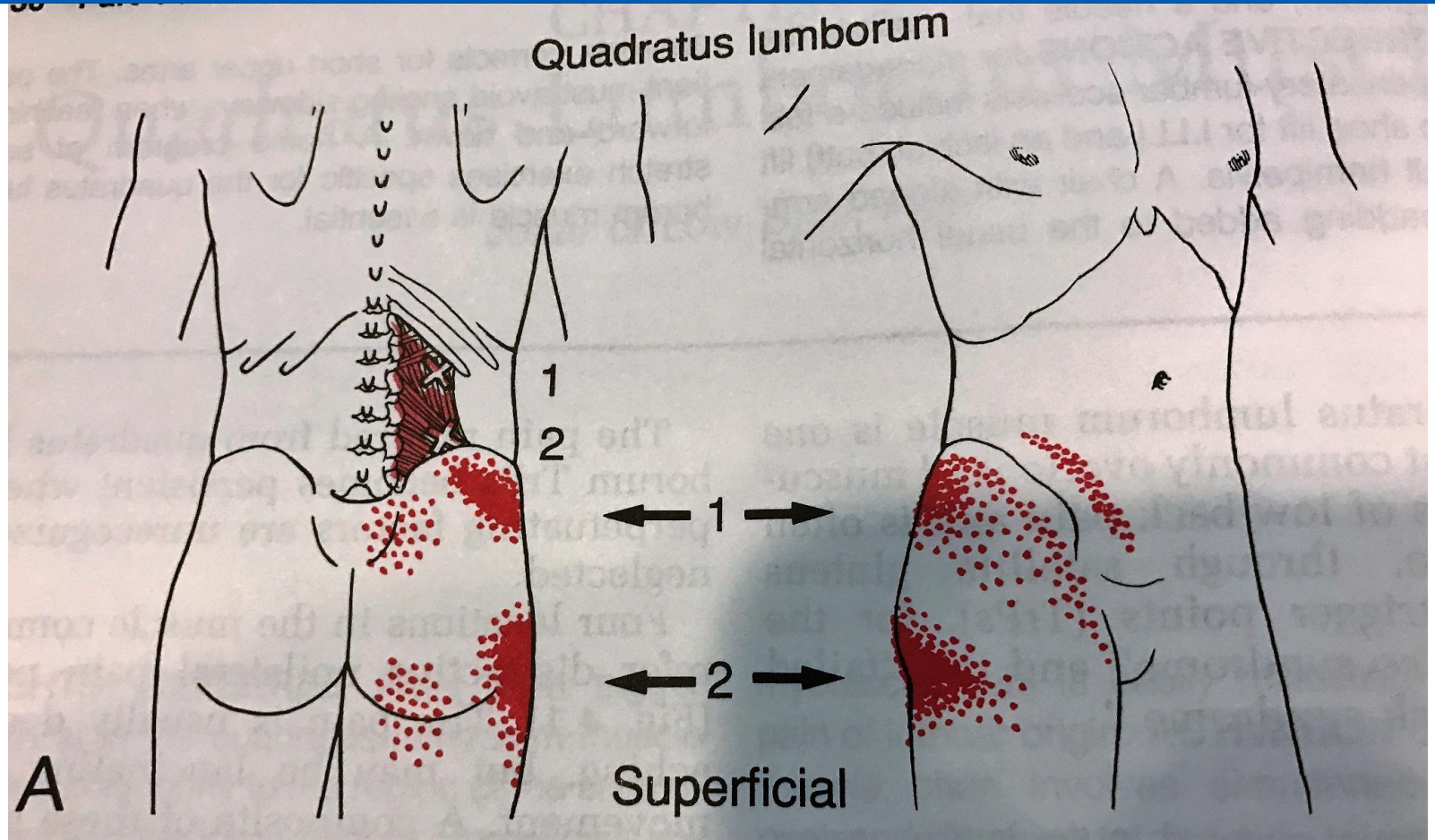


iliopsoas

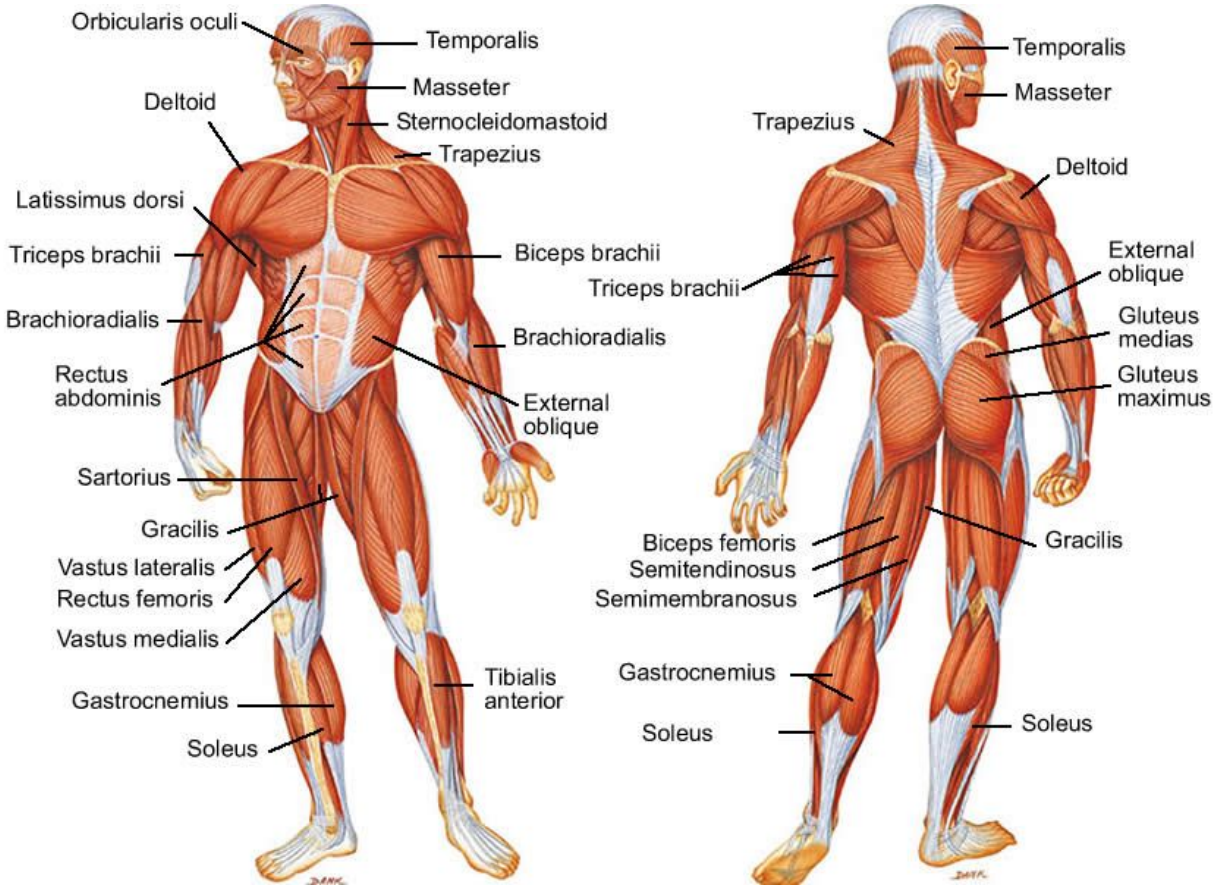



Pectineus
Adductor Brevis
Adductor Longus
Adductor Magnus
Gracilis

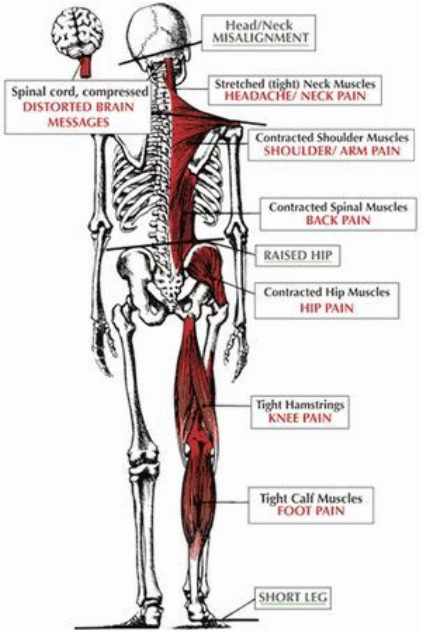

TrP2
TrP1


Quadratus lumborum
1
2
1
2
A
Superficial


WHAT'S WRONG WITH ME?
SCHULZ


Orbicularis oculi
Temporalis
Masseter
Deltoid
Sternocleidomastoid
Trapezius
Latissimus dorsi
Triceps brachii
Biceps brachii
Brachioradialis
Brachioradialis
Rectus abdominis
External oblique
Sartorius
Gracilis
Vastus lateralis
Rectus femoris
Vastus medialis
Tibialis anterior
Gastrocnemius
Soleus
Temporalis
Masseter
Trapezius
Deltoid
External oblique
Triceps brachii
Gluteus medias
Gluteus maximus
Biceps femoris
Semitendinosus
Semimembranosus
Gracilis
Gastrocnemius
Soleus
Soleus

HERE'S WHAT HAPPENS



BODY IMBALANCE

When the head (10-14 lbs.) is shifted off the center of the top of the neck, the rest of the body will compensate for the shift of weight.

The spine and pelvis will twist causing one shoulder to drop down, one hip to be pulled up, bringing the leg with it to create body imbalance.

The stress and tension on the muscles can cause pain anywhere in the body.

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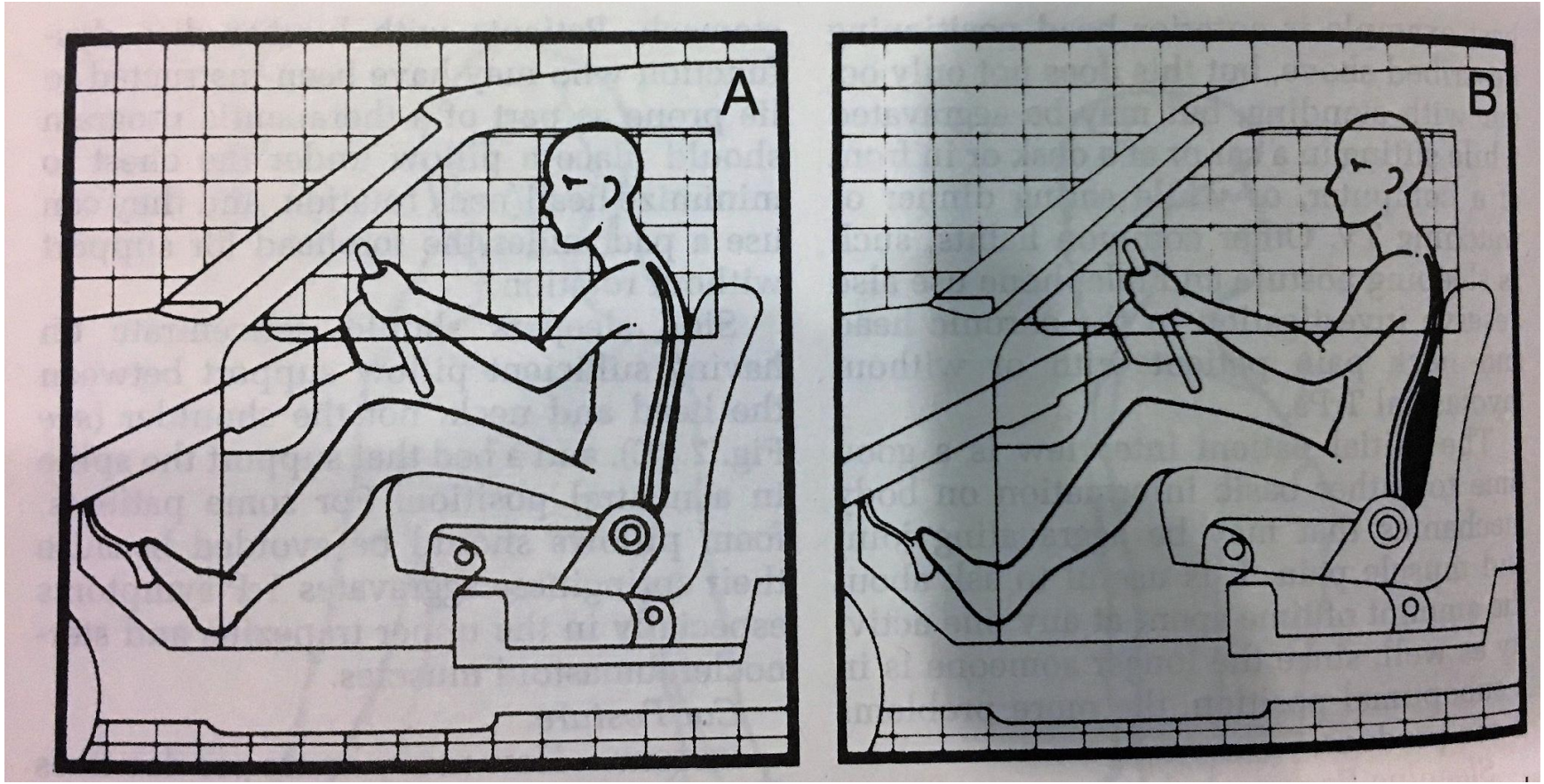
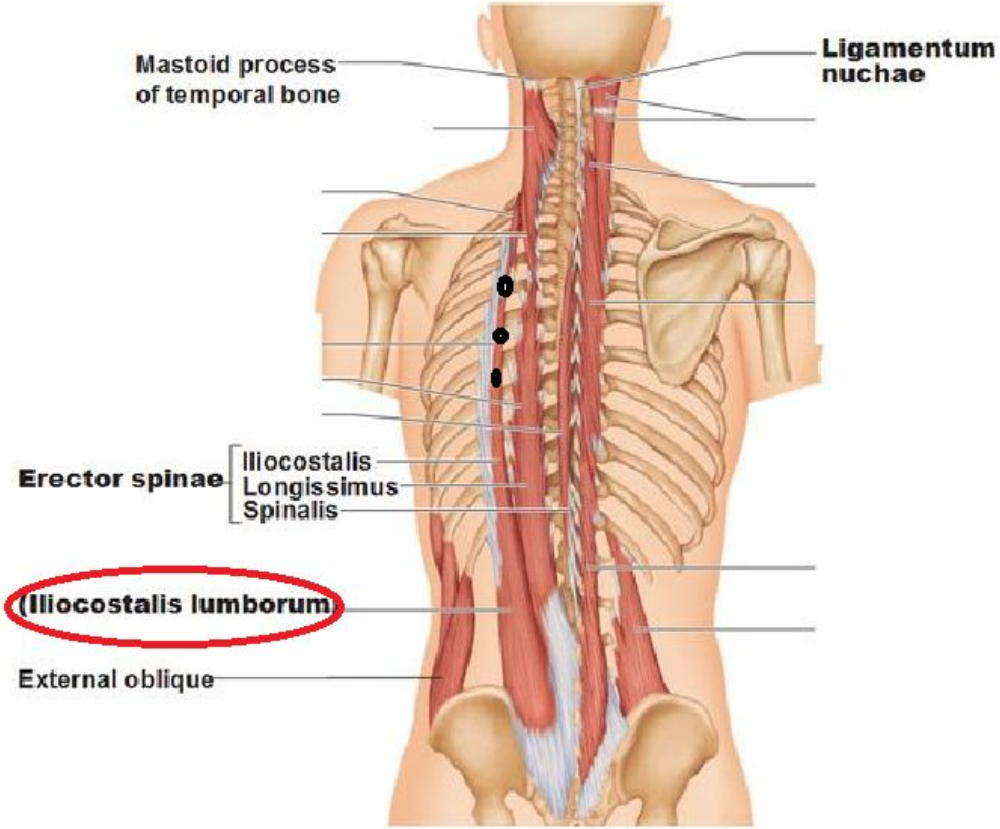
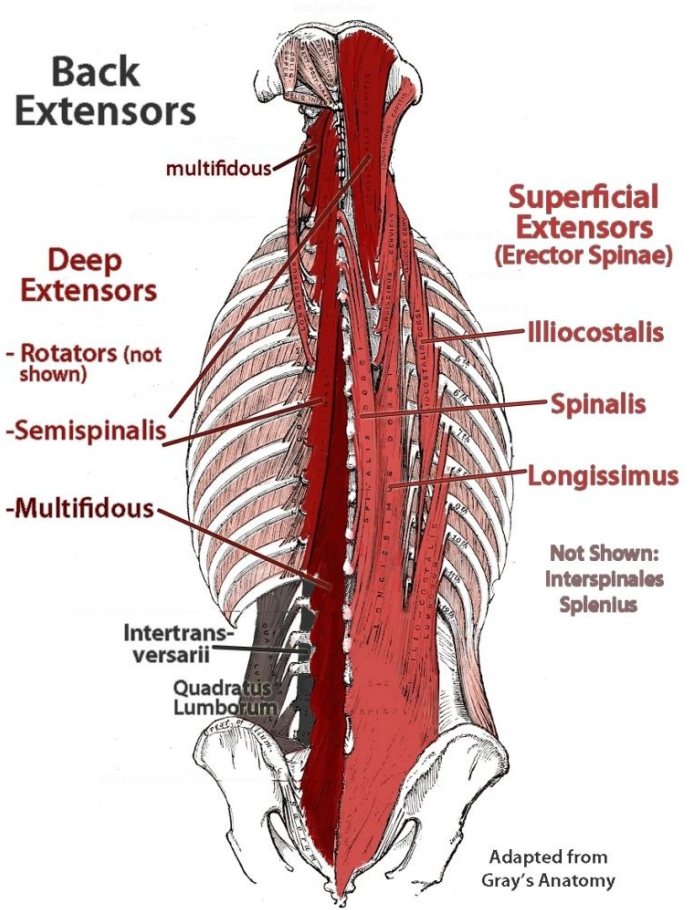
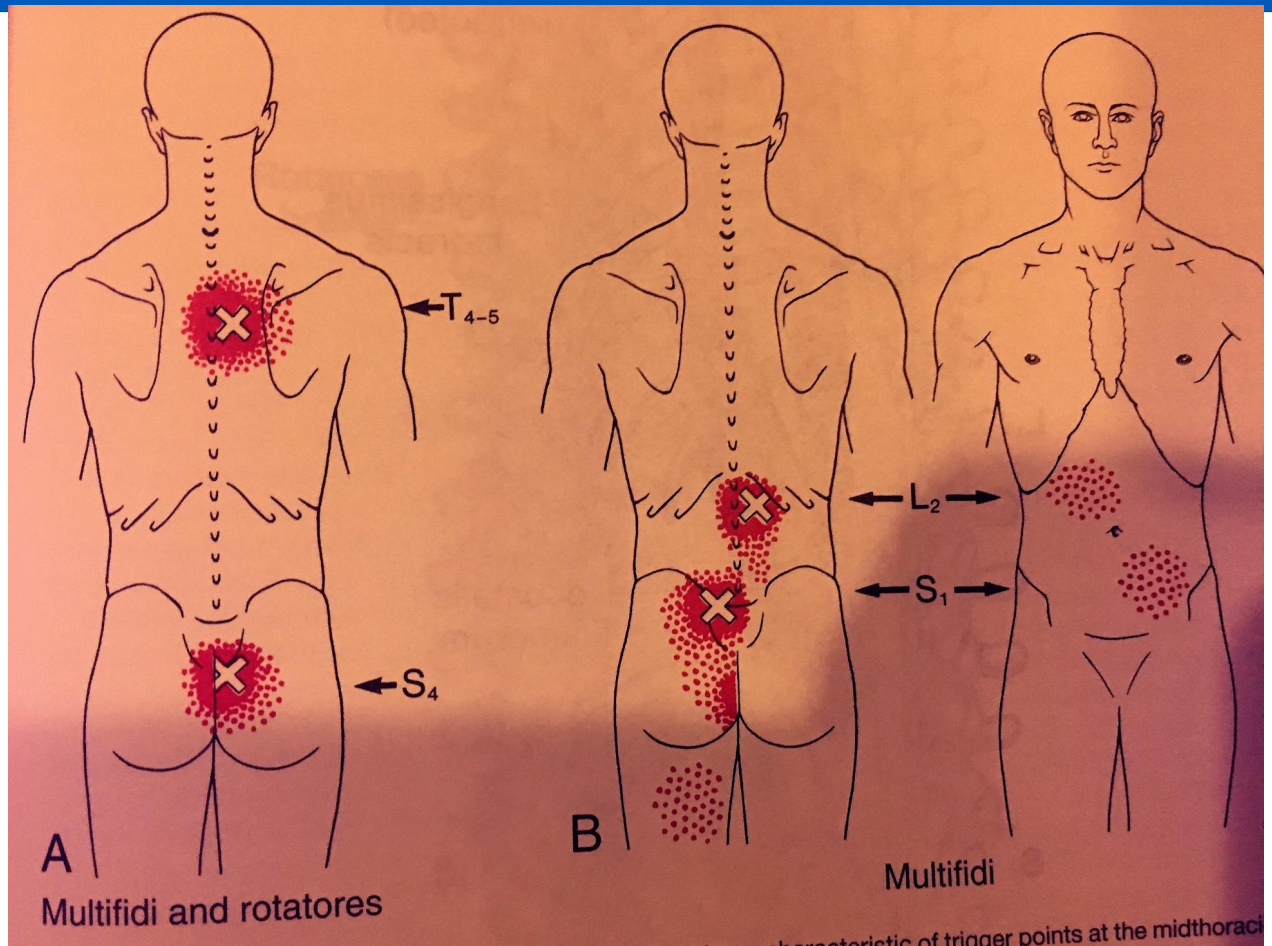

A
B



adapted fro studyblue.com


Back Extensors
multifidous
Superficial Extensors (Erector Spinae)
Deep Extensors
- Rotators (not shown)
-Semispinalis
-Multifidous
Iliocostalis
Spinalis
Longissimus
Not Shown:
Interspinales
Splenius
Intertrans-versarii
Quadratus Lumborum
Adapted from Gray's Anatomy


T4-5
S4
A
Multifidi and rotatores
B
L2
S1
Multifidi

Home exercise program daily

Myofacial Pain

- Opioids
- Muscle relaxants
- Trigger point injections
- Are not the first line of treatment of choice for these cases

Low Back Treatment – 95% Improved With Exercise and/or Physical Therapy

ISSUES WITH PHYSICAL THERAPY NOW

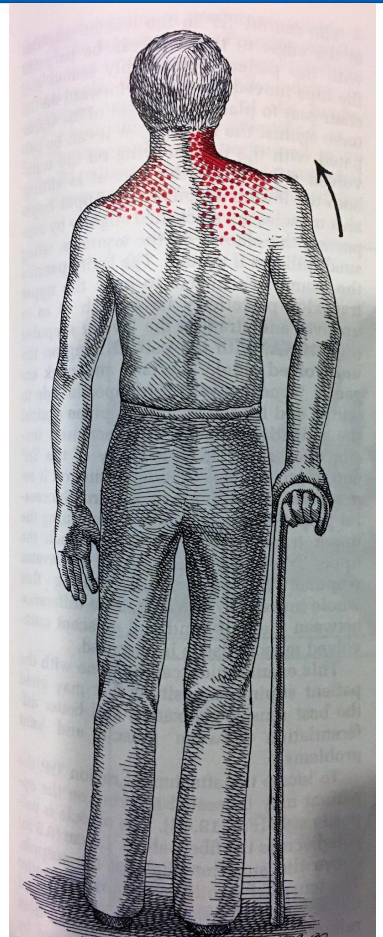
- Not all physical therapist know myofascial release
- TREAT ONLY ONE PART AT A TIME
- CO PAYS (CANNOT AFFORD IT)
- ONLY 10-12 SESSIONS COVERED PER YEAR
- PMD should reinforce continued long term home exercise program

Functional improvement, return to work

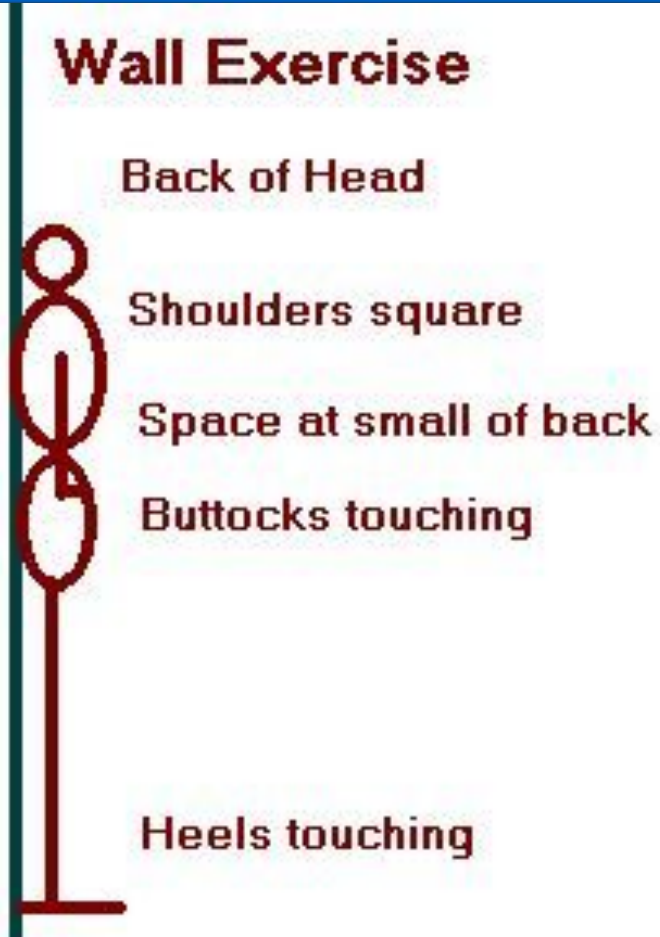
Work hardening acces V-R

Elderly

- Posture correction
- Walker



Wall Exercise




Sway Back Posture
Forward Head
Neck Extensors Strong
Neck Flexors Weak
Upper Back Extensors, Weak
Chest Muscles Short, Tight
Upper Trunk Shifted Rearward
Abdominals
Upper Internal Oblique Shortened, Strong
Strain felt more often
External Oblique Elongated, Weak
Pelvis Tilted Back, Lower Lumbar Flattened
Pelvis Shifted Forward
Hip Flexors Weak
Hip Extensors (Hamstrings) Short, Tight
Knees Hyper-Extended
fixtheneck.com
Plumb line pt. of reference

Referring Physician

- What is the training what is in their armaments
- Only medications
- Only injections
- Is function being monitored q 3 months
- Get another opinion
- Missed diagnosis ???

- Blaming the pharmaceutical company
- Blaming the patients
- Treat patients as addicts with methadone and suboxone

USASP
US ASSOCIATION FOR THE STUDY OF PAIN

PUBLISHED BY
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Examining the Relationship Between Chronic Pain and Mortality in U.S. Adults

B. Michael Ray,[*] Kyle J. Kelleran,[†] Jesse G. Fodero,[†,‡] and Lindsey A. Harvell-Bowman[§]

[*]*Department of Health & Human Sciences, Bridgewater College, Bridgewater, Virginia,* [†]*Department of Emergency Medicine, University at Buffalo, Buffalo, New York,* [‡]*Department of Orthopedics and Sports Medicine, University at Buffalo, Buffalo, New York,* [§]*School of Communication Studies, James Madison University, Harrisonburg, Virginia*

- 20% reported CP and 8% High Impact Chronic pain HICP,
- higher mortality rates than pain-free individuals
- CP: 5.55% 2 Times
- HICP:8.79% 2.5 Times
- (HICP, 1 major activity restriction, such as work, social, or self-care),
- White, older adults, females,married, and residing in the southern region
- Total patients 245,899,776

Solution?

- Graduate healthcare programs should consider curriculum redesign to incorporate pain-specific course(s) aimed at updating pain models and emphasizing evidence-based practices for the assessment and management of CP conditions
- 80% of U.S.medical curricula lack formal pain education as required courses or electives

Bansal Pain Managment Seed Funding Opportunity

The Office of the Vice President for Health Sciences (OVPHS) invites faculty across UB's units to submit proposals for innovative research in pain management.

Purpose: The goal of this funding opportunity is to facilitate the expansion of medical education so that physicians have the appropriate foundation of clinical skills needed to prevent iatrogenic opioid use disorders (OUD) among their panel of patients and to manage patients who have developed an OUD. This typically involves a comprehensive approach.

POTENTIAL RECIPIENTS OF PROPOSED EDUCATIONAL INTERVENTION

1. Medical students,
2. Residents and fellows: family medicine, internal medicine, emergency medicine, rheumatology, neurology etc.
3. Physicians and other medical practitioners in Erie County

BACKGROUND

The opioid epidemic has caused widespread harm, particularly for individuals with chronic pain disorders who may also develop opioid use disorder (OUD). There is an urgent need for strategies to prevent OUD, especially in these patients, and to support those who have developed an iatrogenic OUD.

ABOUT DR. PRATIBHA BANSAL

Dr. Bansal was Western New York's first fellowship-trained, board-certified interventional pain management specialist,1983. Dr. Bansal served as Medical Director of Pain Services at Millard Fillmore Hospital and founded Pain Rehab of Western New York, until retiring in June 2024. She revolutionized pain management education by training anesthesiologists, nurses, pharmacists, and surgeons while raising public awareness about this emerging specialty. She served as a Clinical Assistant Professor at the university and taught primary care physicians, UB Family Practice residents, pain fellows and UB medical students and has mentored high school students in Buffalo Public