

Updates on Non-Operative Modalities

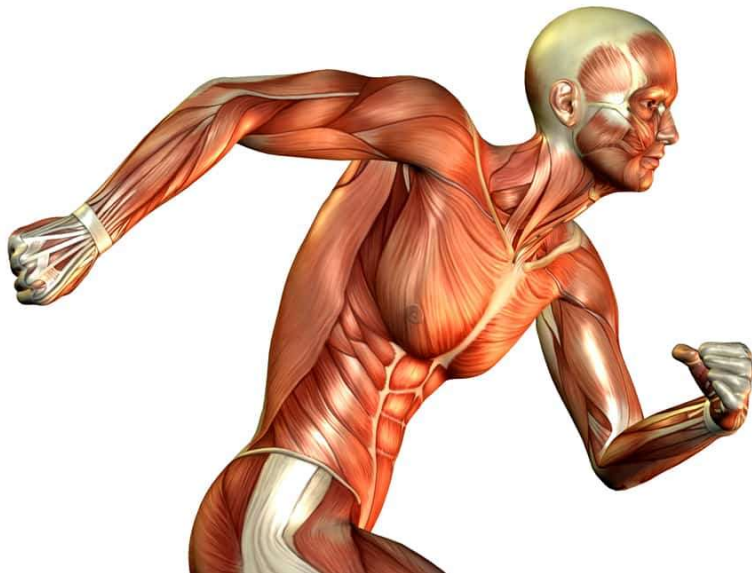
Chairperson: Dr. Karen Huyck

Monday, April 30th

1:35 – 2:15pm

*Work Related Injuries Workshop
April 30th & May 1st, 2018*

Emerging Topics In Physical Therapy for Injury Care



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Benefits of Physical Therapy

- Maximize movement and independence
- Provide collaborative care
 - Individualized treatment to the patient, identifying his/her own goals
- Avoid opioids⁸
 - Safe alternative for pain management
- Avoid surgery
 - PT proven as effective as surgery for non-traumatic RTC tears¹⁰, meniscal tears⁹, knee OA⁹, spinal stenosis⁵, DDD⁵

APTA : <https://www.moveforwardpt.com/Benefits/Default.aspx>

Why Physical Therapy?

- Cost effective
- Faster return to work
- Non invasive
- **START PT EARLY!**^{4,11,15}

Fritz JM, Magel JS, McFadden M, Asche C, Thackeray A, Meier W, Brennan G. Early Physical Therapy vs Usual Care in Patients With Recent-Onset Low Back Pain A Randomized Clinical Trial. *JAMA*. 2015;314(14):1459–1467. doi:10.1001/jama.2015.11648

Conclusions: “Among adults with recent-onset LBP, early physical therapy resulted in statistically significant improvement in disability, but the improvement was modest and did not achieve the minimum clinically important difference compared with usual care.”



Quality PT?

- Avoid passive modalities^{1,12,14}
 - Heat, ultrasound, TENS
- Functional assessment
 - Functional Outcome Measures
 - Questionnaires
- Evidenced based treatment
 - Clinical Practice Guidelines^{2,4}
- *Early treatment, active exercise, manual therapies*

Common Injuries¹⁶

Injury	Percentage	PT diagnosis
Sprains, strains, tears	40.6%	RTC tear
Pain, soreness	15.1%	Low back pain
Fractures	6.4%	Hand fractures
Carpal Tunnel Syndrome	0.3%	Carpal Tunnel syndrome
Tendinitis	0.2%	Lateral epicondylitis, RTC tendinitis/ tendinopathy

<http://www.mass.gov/lwd/labor-standards/occupational-safety-and-health-statistics-program/illness-and-injuries-reports/2015-occup-injury-and-illness-report.pdf>

Quality care and treatment. *What to look for?*

Diagnosis	PT Intervention
RTC tear	Restore ROM/mobility, scapula stabilization, core stabilization, progressive strengthening ¹⁰
Low back pain (subacute)	Thrust/non-thrust mobilization to spine, hip or pelvis; trunk coordination, strengthening and endurance exercises (multifidi, transversus abdominus, motor control) ⁴
Supraspinatus tendinopathy	Not inflammatory process but degenerative. EdUReP (education, unloading, reloading-eccentric exercise, prevention) ³

New Tools and Modalities

- Technology¹³
 - Apps
 - Telehealth/TeleRehab
- Rehab robots¹³
- Virtual reality¹³
- Exoskeletons
- Body weight support treadmills
- Dry needling



Emerging Roles of PT

Roles

- Wound care
- Lymphedema management/oncology
- Women's health
 - Pelvic floor dysfunction
 - Transgender programs
- Concussion management
- Emergency/urgent care

Prevention

- Ergonomic assessments
- Obesity management
- Pain management
 - Therapeutic neuroscience education
 - Psychosocial factors
 - Decrease opioid use

References

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Acupuncture in Occupational Health

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Keys to Care

Workers Compensation Case

- Quick resolution of pain and functional limitations
- Minimize length of Rehabilitation time
- AVOID use of medications that can cause dependency



Early Prescription of Opioids in WC

- Recent review suggests that early prescription of opioids in WC cases leads to longer disability and delayed return to work

Opioids affect outcome in WC Spine Cases

- Analysis of cohort of WC patients who underwent one level lumbar discectomy in Ohio
 - Preoperative use of opioid use was an independent predictor of not returning to work after surgery [$P < 0.01$; odds ratio (OR) = 0.54]
 - Of the 712 patients who returned to work RTW, There was a significant difference in RTW rates
 - no opioid prior to surgery (64.1%)
 - Moderate time of use (52.7%), and Long term use (36.9%) populations



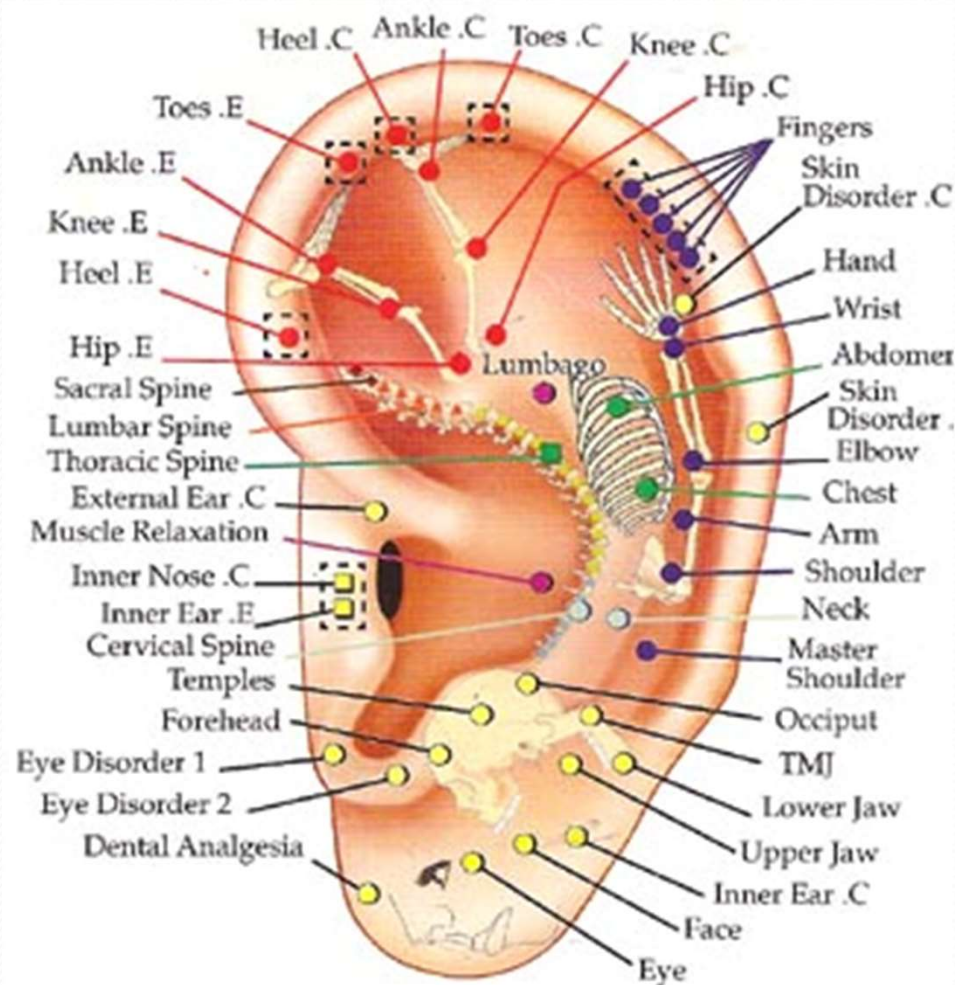
Opioid Crisis

- American College of Physicians
 - Based on a systematic review of the literature, rather than opioids, which have no evidence of efficacy, Acupuncture should be considered a first line treatment for both acute and chronic back pain

Efficacy of Acupuncture for Common Pain Conditions

Acupuncture vs Sham-acupuncture	effect size fixed effect (95%-CI)
Osteoarthritis of the knee	0.26 (0.17 - 0.47)
Low back pain / neck pain	0.37 (0.27 - 0.46)
Shoulder pain	0.62 (0.46 - 0.77)
Tension type headache / migraine	0.15 (0.07 - 0.24)
Acupuncture vs Non-acupuncture control	effect size fixed effect (95%-CI)
Osteoarthritis of the knee	0.57 (0.50 - 0.64)
Low back pain / neck pain	0.55 (0.51 - 0.58)
Tension type headache / migraine	0.42 (0.37 - 0.46)

Efficient Techniques



Local Needling Techniques





Acupuncture at Front Lines

- Physicians and APC need to learn basic acupuncture techniques to introduce in the early stages of Occupational Health care
 - Serve as viable alternative to opioids for analgesia
 - Ideally can shorten duration of care

Chiropractic Evaluation Principles in Workers' Compensation

Dr. Stephen Heney

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