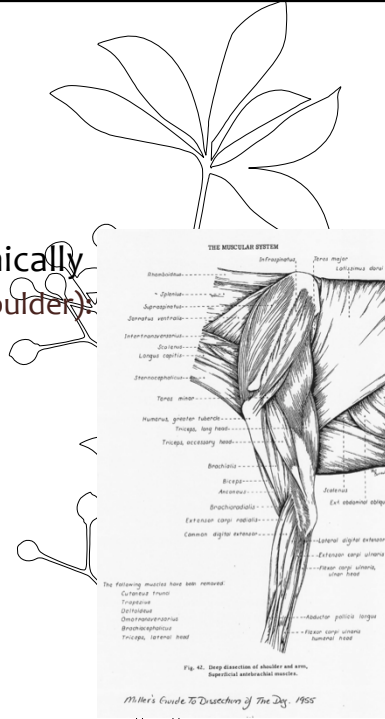


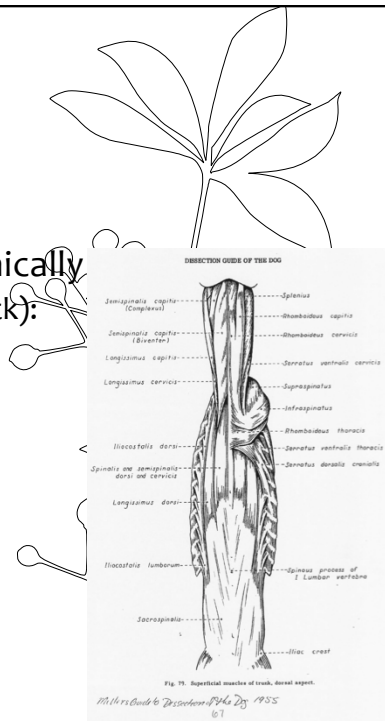
## Myofascial Trigger Points

- Myofascial Trigger points – clinically
- **Common locations** (around the shoulder)
  - Infraspinatus
  - Triceps
  - Latissimus Dorsi / Teres Major
- Clinical Signs:
  - Pain on palpation
  - Subtle lameness
  - Movement restrictions



## Myofascial Trigger Points

- Myofascial Trigger points – clinically
- **Common locations** (around the back):
  - Iliocostalis,
  - Quadratus Lumborum,
  - Iliopsoas
- Clinical signs
  - Pain on palpation
  - Rounded back appearance (back pain)
  - May seem stiff



## Myofascial Trigger Points

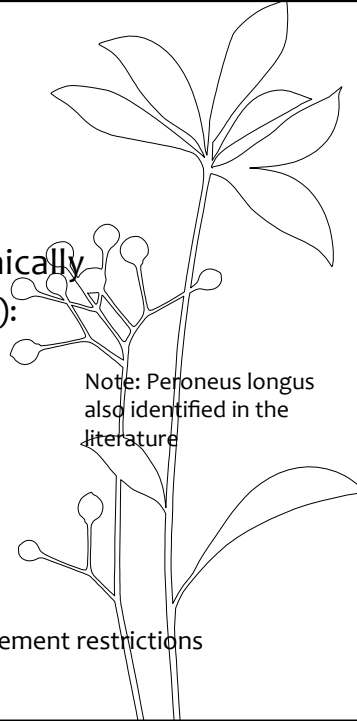
- Myofascial Trigger points – clinically

- **Common locations** (around the hip):

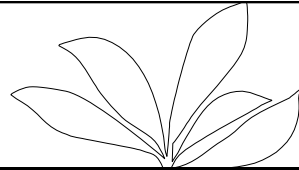
- Quadriceps & Sartorius
- Pectineus / Adductors
- Semi-membranosus / Semi-tendinosus
- Gluteus Medius & Deep Gluteal
- TFL
- Gracilis

- **Clinical Signs:**

- Pain on palpation, Subtle lameness, Movement restrictions



## Myofascial Trigger Points



## Myofascial Trigger Points

- Myofascial Trigger points – canine research
  - Janssens LA. Trigger point therapy. *Probl Vet Med* 1992, 4(1): 117 - 124
    - 80% success rate for those with one or few MTPs.
    - Those with many TPs reacted badly to treatment – Fibromyalgia?
  - Janssens LA. Trigger points in 48 dogs with myofascial pain syndromes. *Vet Surg* 1991, 20(4): 272-278.
    - Prior lameness ranged from 1 day to 150 weeks (mean was 24 weeks)
    - Mean Rx period was 2.8 weeks
    - Excellent results in 60% of dogs treated

## Manual & Mechanical Treatment of Myofascial Trigger Points

## Myofascial Trigger Points

- Manual & Mechanical Treatments

### ISCHAEMIC COMPRESSION / Shiatsu Massage

- Gradually increasing pressure to the MTrP until the sensation of pressure became one of pressure and pain.
- Pressure is then maintained until the discomfort and/or pain eased by around 50%, ( as perceived by the patient)
- Then pressure is increased until discomfort appears again.
- Repeat for 90 seconds.
- This technique is claimed to be more effective when executed with the muscle in a lengthened position

## Myofascial Trigger Points

- Manual & Mechanical Treatments

### TRIGGER POINT PRESSURE RELEASE

- Application of a slowly increasing, non-painful pressure over a trigger point until a barrier of tissue resistance is encountered. Contact is then maintained until the tissue barrier released and pressure is increased to reach a new barrier to eliminate the trigger point tension & tenderness.

## Myofascial Trigger Points

- Manual & Mechanical Treatments
  - Manual Therapy (research)
  - Heat
  - Cold & Stretch
  - Ultrasound
  - Laser
  - Electrotherapies
  - Shockwave



## Myofascial Trigger Points

- Manual & Mechanical Treatments

Stretching	Passive stretching along with fluoromethane vapocoolant spray decreased pain and increased pressure pain threshold in people with myofascial pain. (uncontrolled study)	Jaeger & Reeves 1986
Dry Needling	Dry needling combined with active stretching exercises produced greater reduction in pain compared to active stretching alone or a no-treatment control.	Edwards & Knowles 2003

## Myofascial Trigger Points

### • Manual & Mechanical Treatments

Ischemic pressure	Ischemic pressure of a myofascial trigger point when combined with active ROM exercises has an immediate effect on reducing pain, increasing pressure pain threshold and tolerance and improving range of motion. Both ischemic pressure and transverse friction massage significantly reduce pain intensity	Hou et al 2002 Fernández-de-las-Peñas et al 2006
Massage	Both Thai massage plus stretches and Swedish massage plus stretches show significant reductions in pain and disability measures	Chatchawan et al 2009

## Myofascial Trigger Points

### • Manual & Mechanical Treatments

Combined Therapies	Hot packs and active ROM showed significant increases in pain thresholds and tolerance and a small decrease in pain. Adding ischemic pressure or spray and stretch to the hot packs and AROM showed similar increases in pain threshold and tolerance and a greater decrease in pain. Adding TENS or interferential current to the hot packs and AROM similarly increased pain threshold and tolerance and resulted in a further decrease in pain	Hou et al 2002
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## Myofascial Trigger Point Mini Course

<h3>Myofascial Trigger Points</h3> <p>• Manual &amp; Mechanical Treatments</p>		
<p>Ultrasound Conventional</p>	<p>1MHz x CW x <u>1.0W/cm<sup>2</sup></u> x 5 mins = Significant improvement 1MHz x 12% x <u>0.52W/cm<sup>2</sup></u> x 10 min = Significant differences at 1 – 3 mins post-RX but not at 10 – 15 mins.</p>	<p>Srbely et al 2007 &amp; 2008</p>
<p>Ultrasound Unconventional</p>	<p>Conventional: 1.5W/cm<sup>2</sup> x CW x 5 min x 10 – 15 sessions High Powered: CW &amp; gradually increasing intensity, motionless – held to pain tolerance (4 – 5 sec), then ½ intensity for 15 sec, 3reps. Both groups improved, high power was better for pain relief faster</p>	<p>Majlesi et al 2004</p>

<h3>Myofascial Trigger Points</h3> <p>• Manual &amp; Mechanical Treatments</p>		
<p>Laser</p>	<p>904 nm Super-pulsed, Class 3b laser 2J/cm<sup>2</sup> x up to 10 MTrP in trapezius x 10 days over 2 weeks Short-period application of LLLT is effective in pain relief (reduction in pain scores at rest &amp; with movement)</p>	<p>Gur et al 2004</p>
<p>Laser vs Dry needling vs Placebo</p>	<p>Laser: HeNe 632nm x 3 MTrP in trapezius 2J/cm<sup>2</sup> x 12 sessions (over 4 weeks) Dry Needling in upper trapezius MTrP Once/week x 4 weeks. Both groups improved in pain &amp; function scores and in ROM at 4 week mark (no differences btwn groups at 6 mo mark)</p>	<p>Ilbuldu et al 2004</p>

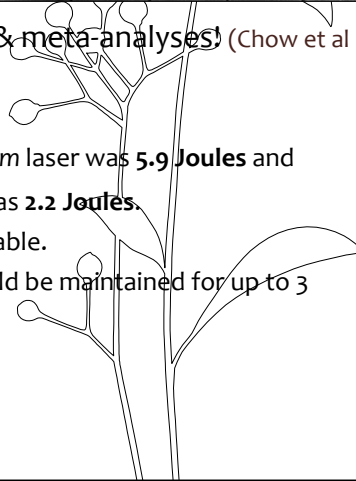


## LASER Therapy



- Dosages for PAIN

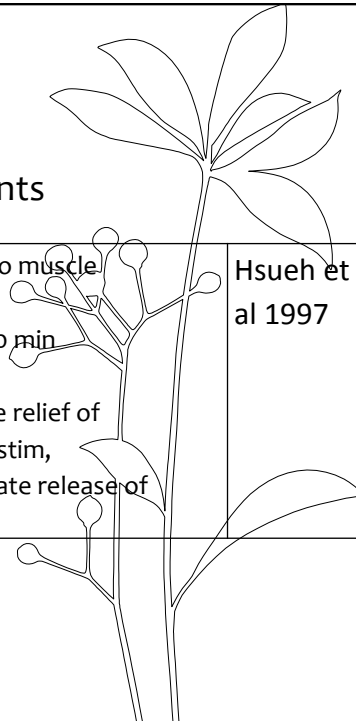
- NEW brilliant, high quality reviews & meta-analyses (Chow et al 2009)
- Acute and chronic NECK PAIN:
  - Optimum dose per point for an 820-830nm laser was **5.9 Joules** and
  - Using a 904nm super-pulsed laser, it was **2.2 Joules**.
  - Number of reps and Rx / week were variable.
  - Positive effects were immediate and could be maintained for up to 3 months after treatment ended!



## Myofascial Trigger Points

- Manual & Mechanical Treatments

TENS & EMS	TENS = 60Hz x 20 min x strong but no muscle contraction EMS = 10Hz, visible contractions, x 20 min <u>Outcome:</u> TENS is more effective for immediate relief of myofascial trigger point pain than E-stim, E-stim has a better effect on immediate release of muscle tightness than TENS.	Hsueh et al 1997
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## Myofascial Trigger Points

- Manual & Mechanical Treatments

Shockwave	Use of focused or radial shockwave is a potential treatment for myofascial trigger points	Kuan 2009; Gleitz & Hornig 2012
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NOTE: You're main goal is to increase blood flow to the area with any of these mechanical or manual therapies!

## Myofascial Trigger Points

- Manual & Mechanical Treatments

### TREAT THE UNDERLYING ETIOLOGY

- Osteoarthritis
- Joint movement dysfunctions
- Muscle weakness, shortness, overuse
- Posture

So examine the whole patient and work to make correlations & address plausible primary problem areas!

Myofascial Trigger Point Mini Course

Myofascial Trigger Points



[www.FourLeg.com](http://www.FourLeg.com)

THANKS FOR WATCHING! Now go out there and make your difference today!!

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