

Myofascial Release

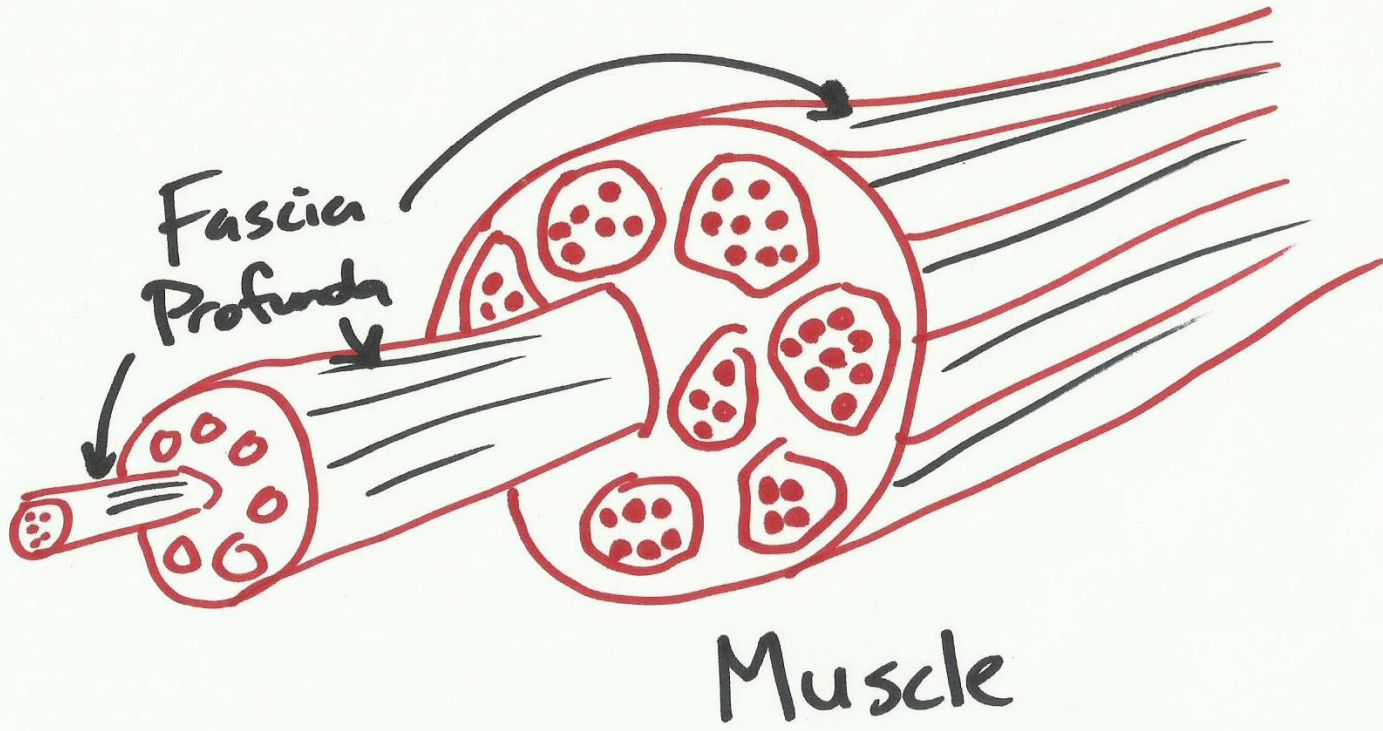
Kolby Mumau, DC

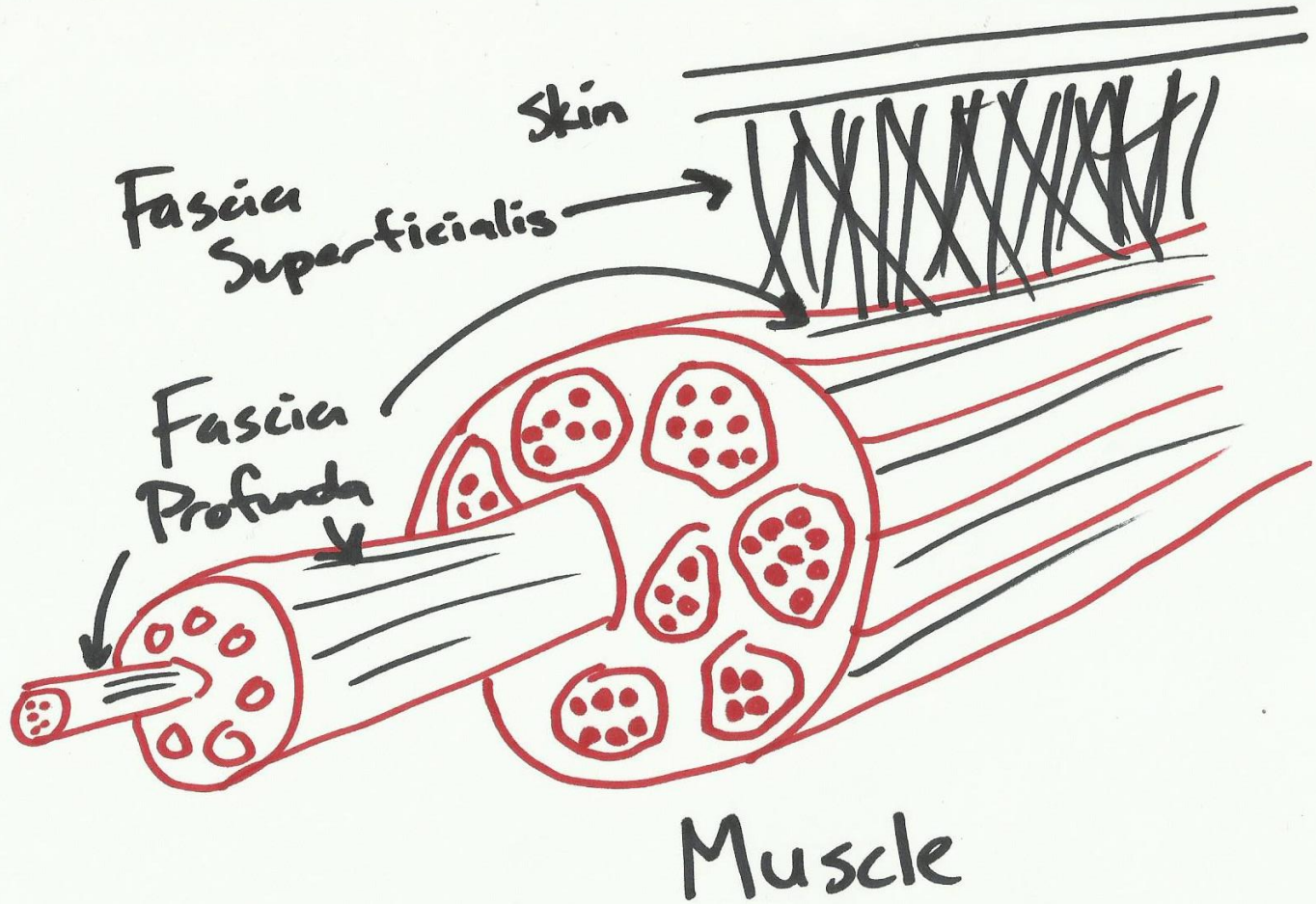


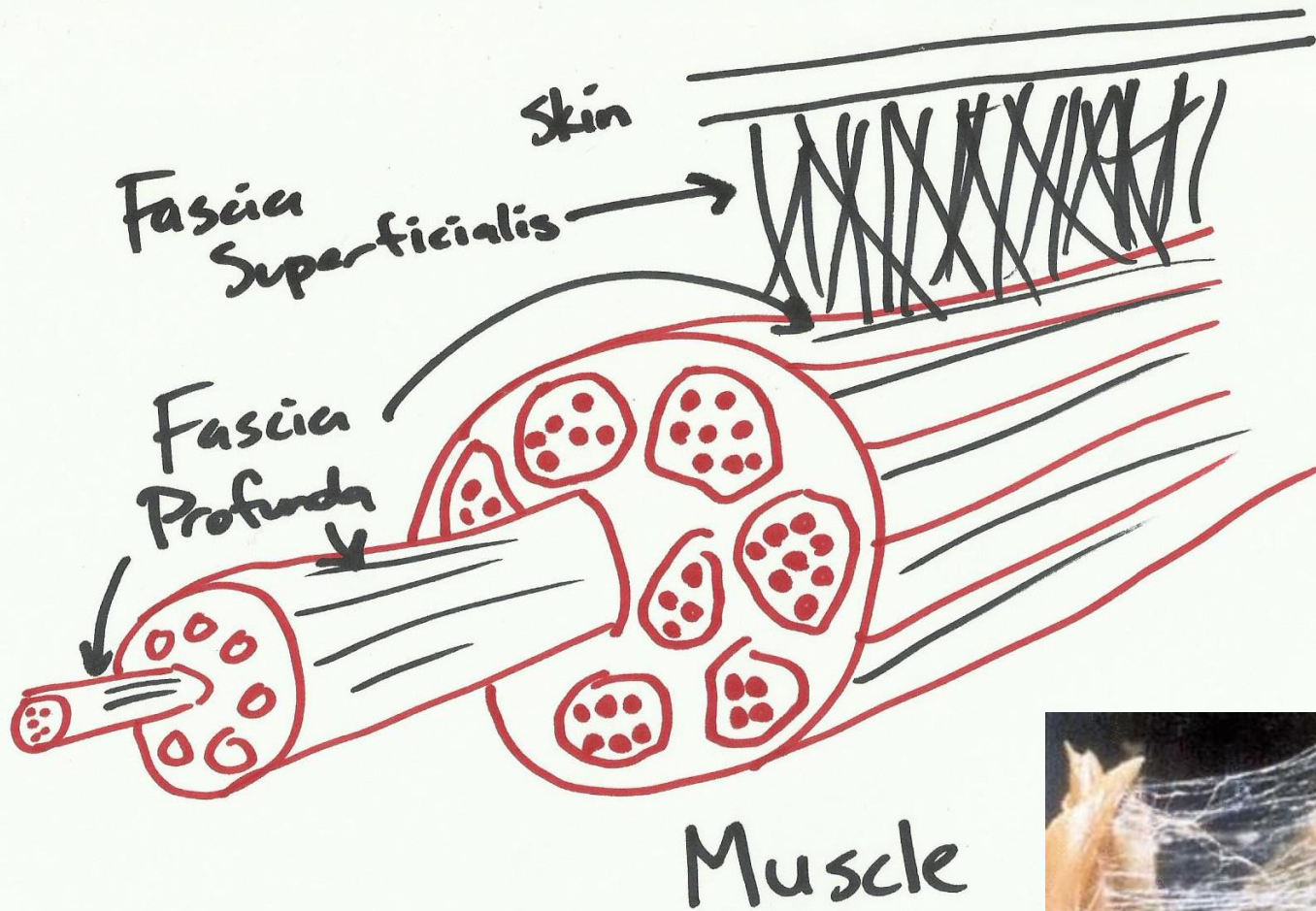
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What changes the fascia?

- Injury/Trauma, which leads to...
- Fibrosis, which leads to...
- Loss of relative motion, which leads to...
- Friction, Pain, Decreased force production, altered biomechanics, etc

Motion influenced by fascia

medical hypotheses

Passive muscle stiffness may be influenced by active contractility of intramuscular connective tissue

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“Physical strain has been shown to influence the density of fibroblasts, connective tissue proteins such as collagen and fascial myofibroblasts which may be capable of active fascial contraction”

“ In conclusion, the perimysium seems capable of response to mechanostimulation with a myofibroblast facilitated active tissue contraction, thereby adapting passive muscle stiffness to increased tensional demands, especially in tonic musculature.”

How do we change it?

- Time
- Intent (movement/load/demand)

Time



How much time is required to modify a fascial fibrosis?

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DOI: <http://dx.doi.org/10.1016/j.jbmt.2010.04.006>

SUMMARY: The perception of what appears to be connective tissue fibrosis, and its consequent modification during therapy, is a daily experience for most manual therapists. The aim of this study was to evaluate the time required to modify a palpatory sensation of fibrosis of the fascia in correlation with changes in levels of patient discomfort in 40 subjects with low back pain utilizing the Fascial Manipulation technique. This study evidenced, for the first time, that the time required to modify an apparent fascial density differs in accordance with differences in characteristics of the subjects and of the symptoms. In particular, the mean time to halve the pain was 3.24 min; however, in those subjects with symptoms present from less than 3 months (sub-acute) the mean time was lesser (2.58 min) with respect to the chronic patients (3.29 min). Statistically relevant ($p < 0.05$) differences were also evidenced between the specific points treated.

Intent

- Specific
- Increased loads/demands
- Utilize movement



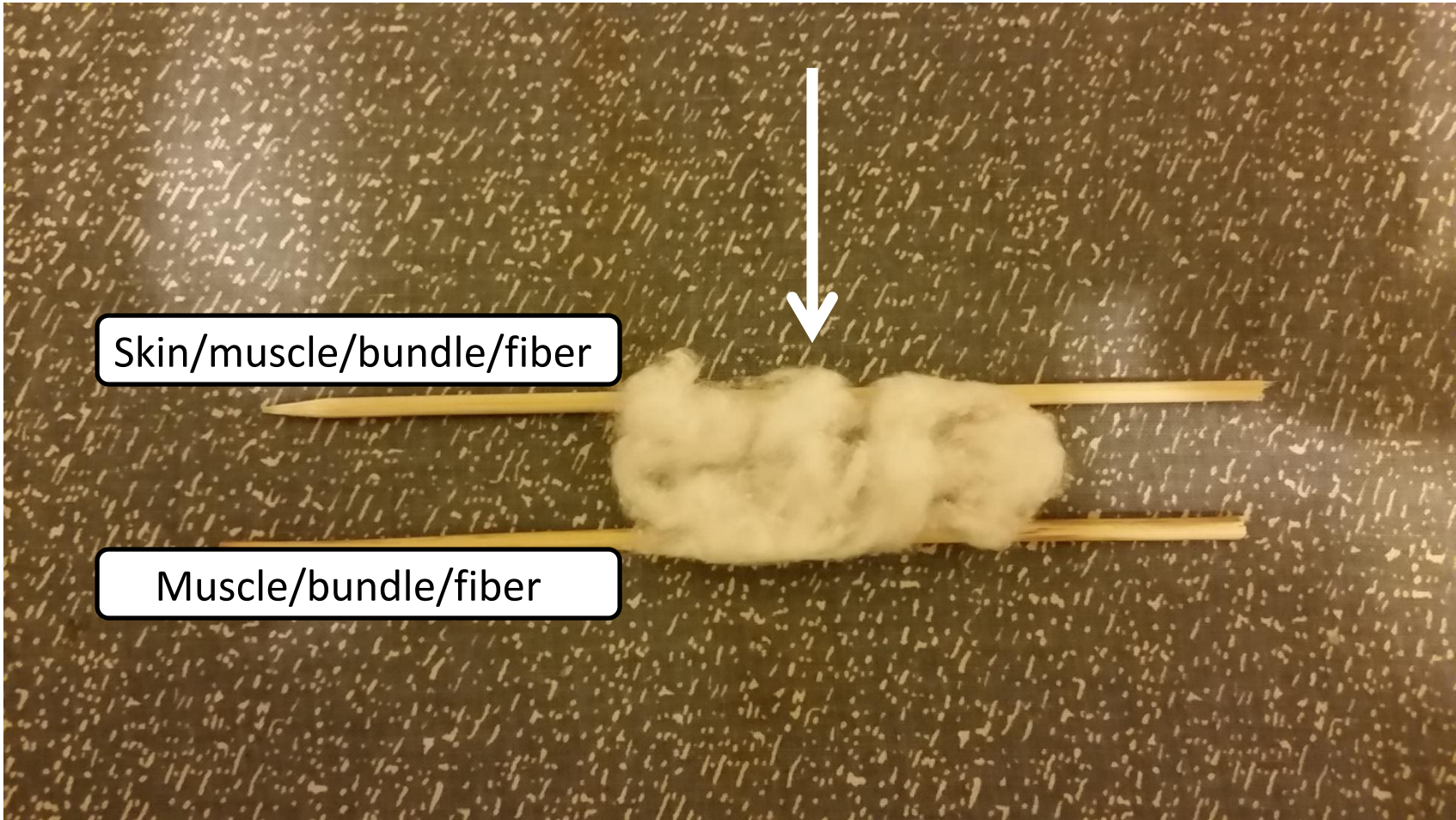
Skin/muscle/bundle/fiber

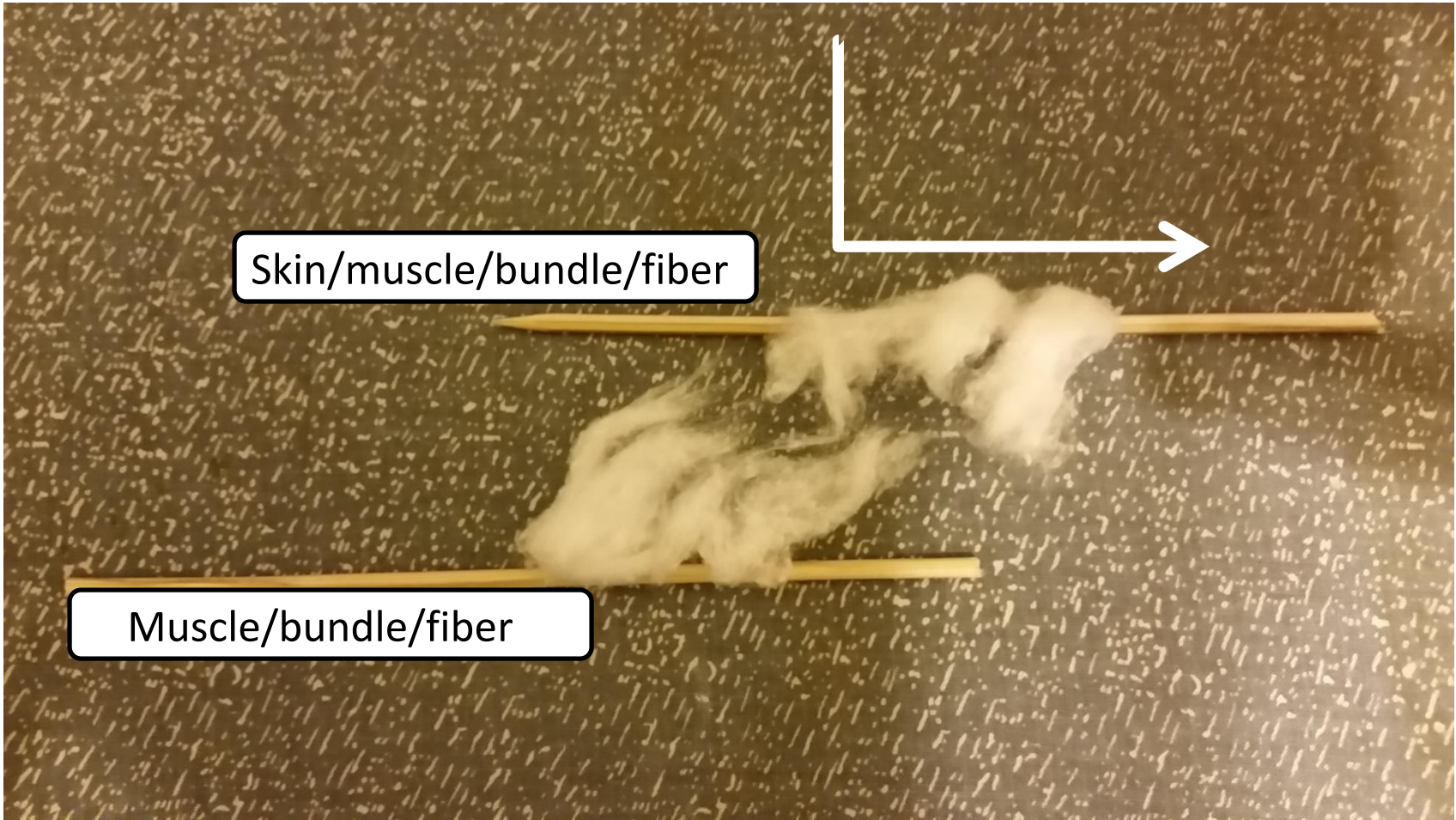
Muscle/bundle/fiber

Skin/muscle/bundle/fiber



Muscle/bundle/fiber






Skin/muscle/bundle/fiber

Muscle/bundle/fiber

Intent



In vitro modeling of repetitive motion injury and myofascial release

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Received: November 1, 2009; Received in revised form: November 12, 2009; Accepted: December 31, 2009;

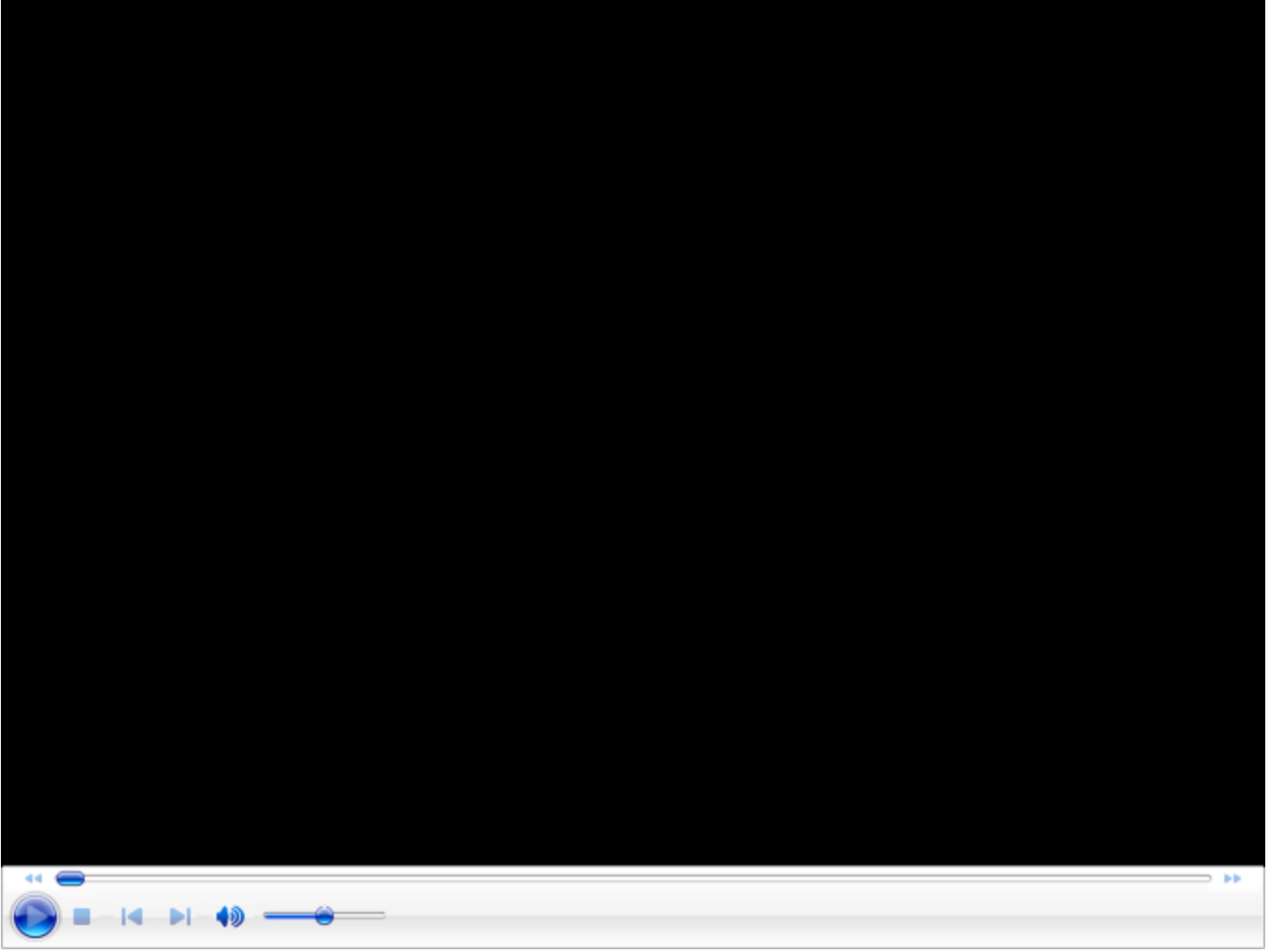
DOI: <http://dx.doi.org/10.1016/j.jbmt.2010.01.002>

“...reports have shown various repetitive strain-induced changes in fibroblast proliferation, growth factor secretions and cellular alignment, ours is the first to show that several morphological changes in fibroblasts seen post repetitive strain are reversed if followed by modeled MFR”

“Treatment with myofascial release (MFR) following modeled repetitive motion strain (RMS) resulted in normalization in apoptotic rate and cell morphology”

Fascial techniques involving movement

- Active Release Technique
- Instrument Assisted Soft Tissue Manipulation
 - Graston
- Functional Range Release



Workshop

- Learn hands-on techniques on:
- Hamstrings
- Gastrocnemius
- Trapezius
- Lumbar paraspinals
- Quadratus lumborum

Questions?

