Systemic Dry Needling for Athletes

- Treatment of soft tissue injuries
- Prevention of chronic injuries
- Optimizing athletic performance
- Health-promotion of athletes
- Age Management (slowing body ageing)
- Prolong athletic career

**Systemic Dry Needling**

- In our approach the athlete body is treated as a whole system which consists of subsystems.
- Each subsystem is analyzed and treated in a systemic way to treat injuries, to prevent injuries, and to balance the subsystem and the whole system.

**Law #1**

- All needling models clinically work.
- All models are partially truthful empirical models.
- There is no scientifically truthful model of dry needling.
LAW #2
• If any scientific researches support one model, in fact, the research support all models

LAW #3
• If any scientific researches denies or falsifies the theory of particular model, they only deny that theory, not the clinical practice of the model.
• This part of the law explains that the clinical technique is effective, but the theories which explain the technique can be scientifically wrong

LAW #4
• All needling techniques of different models are clinically effective
• One technique does not exclude the other

LAW #5
• Physiologically all models do not conflict with each other
• Thus it is possible to integrate all models into a new model

EVIDENCE BASED MEDICINE
WHAT DATA CAN BE DEFINED AS EVIDENCE?

- All data can be used as evidence to support or falsify a particular model
- Highest quality of evidence is the randomized trials or systemic reviews of randomized trials
  - This category of evidence is the lowest likelihood of bias, and hence is the strongest evidence

LIMITATIONS OF EVIDENCE-BASED MEDICINE

- It has been recognized that providing evidence from clinical research is a necessary but not sufficient to provide optimal care
- Clinical practice should drive research
- Research should assist in clinical decision making
- Evidence, whether strong or weak, is never independently sufficient to make clinical decisions

The Concepts of Soft Tissue Dysfunction and Pain in Sports Injuries

USING SPECIFIC THERAPEUTIC TECHNIQUE FOR SPECIFIC PATHOLOGIC CONDITIONS

Dry Needling is Most Effective for:

1. Neuropathic factors (sensory, motor, sympathetic nerves)
2. Inflammation/edema
3. Contracture/spasm of soft tissues
4. Blockage of microcirculation
5.
6.
7.
8. Biomechanical imbalance

Soft tissue dysfunction and pain in sports injuries

1. Neuropathic factors (sensory, motor, sympathetic nerves)
2. Inflammation/edema
3. Contracture/spasm of soft tissues
4. Blockage of microcirculation
5. Tissue adhesion
6. Scar tissues
7. Muscle dystrophy/atrophy
8. Biomechanical imbalance

Electrical Stimulation of Needles is Most Effective for:

1. 
2.
3. Contracture/spasm of soft tissues
4. Blockage of microcirculation
5. Tissue adhesion
6. Scar tissues
7.
8. Biomechanical imbalance
WHAT MAKES DRY NEEDLING THERAPY DIFFERENT FROM OTHER THERAPIES?

WHAT DOES DRY NEEDLING DO?

- Needling punctures the skin and inoculates tiny lesions to soft tissues (muscle fibers, tendons, ligaments, nerve endings, blood vessels, capillaries, etc.)
- The lesioned tissues will be replaced by the regenerated fresh tissues of the same kind without formation of scar tissue in 3-10 days

• Muscle fiber diameters range from 10 to 100 μm
• One-inch deep needling may lesion at least 3,000 muscle fibers
• Three-inch deep needling plus needling manipulation may lesion more than 100,000 muscle fibers and the capillaries surrounding the fibers

HEALING OF MUSCLE FIBERS

PHYSIOLOGICALLY RELEASES:

- Adenosine (smooth muscle vasodialator)
- Hydrogen and nitric oxide (skeletal muscle vasodialator)
- CGRP (local anti-inflammatory and anti-nocioceptive)
- Enkephalin (anti-nocioceptive in dorsal horn)
- Beta-endorphin (“feel good” peptide released in brain)

• Blood circulation improves, swelling reduces, metabolism increases, inflammatory markers become diluted
Difference between dry needling and conventional medicine

Dry needling improves tissue pathophysiology to restore tissue homeostasis which promotes self-healing of the system without side-effect. Dry needling does not treat any diseases itself.

Conventional medicine requires specific diagnosis, and specific treatment. It is pathology-specific therapy. Pathology-specific therapy

CHARACTERISTICS OF DRY NEEDLING THERAPY

1. Non-specific physiological normalization of soft tissue dysfunction
2. Restoration of homeostasis
3. Promotion of self-healing
4. No interference with natural pathologic processes (Pain, inflammation, fever)

HOW DOES SDN RESTORE/IMPROVE BIOMECHANICS OF THE MS SYSTEM?

- Injured soft tissues are deformed which misalign musculoskeletal structure
- Needling injured tissues speed up self-healing to restore the musculoskeletal biomechanics

SYSTEM DRY NEEDLING FOR ATHLETES

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Safety Issues in Dry Needling Practice
No needling in lung area.
Apply only vacuum therapy to this area.

No needling in lung area including anterior and posterior chest areas.
Apply only vacuum therapy to this area.

No needling in lung area including both lateral area.
Apply only vacuum therapy to this area.

No needling in abdominal and kidney areas.
Note: right kidney is lower than the left one.
Apply only vacuum therapy to this area.

No needling in abdominal area.
Apply only vacuum therapy to this area.

No needling above L3 level.
Needle only blue area below L3 level, two finger width away from midline.
Types and Frequency of Short Term Reactions Associated with Acupuncture

Acupuncture in Medicine 2005; 23(3):112-120

Table 1. Positive Reactions
n=9408

<table>
<thead>
<tr>
<th>Type of event</th>
<th>Number of reported reactions</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relaxed</td>
<td>7436</td>
<td>79.1</td>
</tr>
<tr>
<td>Energized</td>
<td>3072</td>
<td>32.7</td>
</tr>
<tr>
<td>Other positive</td>
<td>166</td>
<td>1.8</td>
</tr>
<tr>
<td>Tiredness or drowsiness</td>
<td>2295</td>
<td>24.4</td>
</tr>
</tbody>
</table>

Table 2. Negative Reactions, n=9408

<table>
<thead>
<tr>
<th>Type of event</th>
<th>Number of reported reactions</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain where needle was inserted</td>
<td>1154</td>
<td>12.3</td>
</tr>
<tr>
<td>Bruising</td>
<td>378</td>
<td>4.0</td>
</tr>
<tr>
<td>Pain other than at site of needling</td>
<td>373</td>
<td>4.0</td>
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<tr>
<td>Faint/dizzy</td>
<td>248</td>
<td>2.6</td>
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<tr>
<td>Worsening of condition</td>
<td>165</td>
<td>1.8</td>
</tr>
<tr>
<td>Nauseous</td>
<td>111</td>
<td>1.2</td>
</tr>
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</table>
### Table 2-2: Negative Reactions, n=9408

<table>
<thead>
<tr>
<th>Reaction</th>
<th>Count</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Sweating</td>
<td>79</td>
<td>0.8</td>
</tr>
<tr>
<td>Bleeding</td>
<td>66</td>
<td>0.7</td>
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<tr>
<td>Disorientation/anxiety/nervousness/insomnia/emotional</td>
<td>63</td>
<td>0.7</td>
</tr>
<tr>
<td>Ache/discomfort other than at needle point</td>
<td>49</td>
<td>0.5</td>
</tr>
<tr>
<td>Itching/pins &amp; needles/tingling/burning sensation</td>
<td>33</td>
<td>0.4</td>
</tr>
<tr>
<td>Irritation/ache at needle point</td>
<td>24</td>
<td>0.3</td>
</tr>
<tr>
<td>Other negative</td>
<td>33</td>
<td>0.4</td>
</tr>
</tbody>
</table>