
Handouts, protocols, and cases for treating sports injuries using drugless healing
Dr Eugene Zampieron, ND, MH, RH(AHG)

- This handout contains the following:
- Formulary in order to make or purchase various TCM topical and internal pain, trauma and connective tissue healing formulas
- Cases on how to use/treat various sports injuries and traumas successfully with drugless healing (Herbal, Naturopathic physical medicine, homeopathy)
HANDOUTS formulas and cases

- After trauma, it's critical to use External and internal formulas
Dr EZ’s ecchymosis hit wine liniment

(ACUTE TRAUMA → TOPICAL ONLY)

A HIT “WINE” used to prevent black and blues ecchymosis

- Pseudoginseng 25%
- Croton seed 18%
- **Cinnamon** bark 13%
- Angelica root 13%
- Gentiana 12%
- Inula flower 12%
- Menthol crystal 3%
- **Camphor** crystal 2%

Purchase herbs, grind and measure proportions; use Vodka to macerate the herbs; ready in 3 weeks {but leave herbs to macerate and strain out what you need}; gets stronger over time

- DOSE use Rule of 3-9
San Huang San Cooling Poultice (ACUTE TRAUMA)

Herbal ICE  three yellow immortals

EQUAL PARTS

- Rhizoma rhei (Chinese rhubarb)
- Radix Scute baicalensis (Scute)
- Cortex Phellodendron spp.

- **San Huang San** is FIRST STEP IN ANY INJURY!!
- Dr. Z recommends patient sleep with a San Huang San poultice, changing periodically with fresh herbs

- Herba Taraxacum
- Fructus gardenia
- Flos Carthamni – (Safflower)

Also Useful:

Pain relieving plaster
Yunnan Baiyao plaster
San Huang San Poultice (ACUTE TRAUMA)

Herbal ICE  three yellow immortals

- Can be mixed into a powder with green tea
- Egg whites can be used to make a paste
- Melted bees wax and oil can be mixed and made into ointment

- San Huang San can be made into a tincture
- Dr. Z has prepared liquid, and tincture then froze it in paper cups for ice massage... no more than 10 minutes to avoid stagnation
Two Ingredients in San Hang San Reduce Edema


[Status quo of external therapies with traditional Chinese medicines on edema].

[Article in Chinese]
Xu WC, Jiang H, Ma J

Abstract
Edema, as one of common clinical diseases, could be treated by taking medicines and adopting external therapies with traditional Chinese medicines (TCM). In recent years, there have been many clinical and basic studies concerning external therapies with TCM on edema. Data showed that the external therapies are mostly composed of such purgating drugs as Rhei Radix et Rhizoma, Natrii Sulfas and Pharbitidis Semen, heat-clearing drug such as Phellodendri Chinensis Cortex and resuscitation-inducing drug such as Bomeolum Syntheticum. The study showed that ingredients of external therapies did not pass through hilum and hepatic system, and thus avoided the first pass effect of livers. They enabled effective components of drugs to be rapidly absorbed through pores and skins, strengthened the effect against edema, shortened the treatment course, decreased side effects, and were convenient and inexpensive. External therapies with TCM could play unique advantages in inhibiting edema in the future clinical studies.
Dit Da Jow
Cooling First AID Liniment for any trauma (ACUTE TRAUMA)
alternative or alternate with San huang San

- Rhizoma rhei
- Fructus gardenia
- Flos carthami (safflower)
- Cortex phellodendron
- Resina myrrha
- Gummi Olibaum (Boswellia/Frankincense)

- Sanguis draconis
- Fructus liquidambar
- Radix Angelica sinensis (Dong kwei)
- Cortex Erythrina spp. (Hai tong pi)

EQUAL PARTS
make tincture
Use of FIRST liniment
Dit Da Jow (also called Die Da Jiu, Dit Da Jau, or Dit Da Jao and literally translates to *hit-fall wine*)

• Used by martial artists all over the world. Number one treatment for bruises, muscle pulls, contusions, sprains and fractures

• Recipe is particularly effective for killing pain and reducing swelling and stasis

• Directions: Apply to affected areas 2-3 times per day. Can be used during day and San Huang San at night for initial stages of injury
How to Use Dit Ja Jow

• Use Dit Da Jow on sore spots caused by impact, whether they cause visible bruising or not, sprains and strains, muscles that are sore immediately after training (but not sore from older injuries), joints sore due to rheumatism, *bi syndrome*, and Delayed Onset Muscle Soreness (delayed soreness and stiffness caused by strenuous exercise).
Label of my home made Dit Da jio and herbal ice combined (ACUTE TRAUMA)
TENDON & LIGAMENT WARMING LOTION

- Small amounts of wild and Sichuan aconite (many TCM companies use too much) WARNING
- Semen persica (Tao ren)
- Herba Ephedra
- Pyritium (Copper mineral)

- Myrrh
- Gummi Olibanum (Boswellia/aka frankincense)
- Rhizoma Rhei
- Liquidambaris
- Camphor

Proportions by Herb

- All equal parts except for Aconite, which is toxic and camphor which is the driver.
- Add 1ml aconite to 120 ml tincture bottle is a safer dose than is typically used
TENDON & LIGAMENT WARMING LOTION

• Chronic injuries/Recurrent injuries/Next stage in healing after cooling First Trauma Liniment
• If heat makes injury better, then its time for tendon & Ligament Warming Lotion
• If you don’t know what stage you’re injury is in, use this lotion and watch for signs of inflammation returning.
• If this happens, switch back to the Cooling First Liniment for any trauma
DrZ’s East/West Warming tight Muscle & Tendon Soak

- Dong kwei
- Flos carthamni
- Lignum sappan
- Angelica spp. baizhi
- Rhizoma curcuma
- Radix clematis
- Cortex erythrina or piscidia

- Angelica cousin notopterygii
- Eleuthero
- Achyranthus ox knee
- Pagoda
- Smilax spp
- Boswellia
- Prickly ash
- Herba lobelia

Use .7 parts each except prickly ash and lobelia drop dose as drivers
Herbal Soaks TCM Hydrotherapy

- Use for soft tissue injuries where spasm and tightness are symptoms
- Not used for acute swollen or inflamed injuries
- Primarily used for hand, wrist, foot, ankle injuries, but can be used other areas as hot fomentation
- Dr Z has used this many times for pulled hamstrings and to warm up hamstrings before karate
- Use vinegar to help further augment antispasmodic action
- Can be used and reused for 7 -10 days if kept in fridge
DrZ’ Super Strong Sizzling Sinew Gao {Poultice}
Strong circulation tonic of Qi and blood to injured area after heat is indicated

- 3 gm total wild & Sichuan Aconite
- 15 gm Angelica cousin Bai Zhi
- 6 gm Aucklandia
- 9 gm Magnolia bark
- 9 gm Fennel seed
- 9 gm cortex cinnamon
- 15 gm Boswellia
- 15 gm myrrh
- 15 gm Dragon’s blood
- 15 gm Angelica cousin notopterygii

- 15 gm Cyperus
- 15 gm Achyranthus Ox knee
- 15 gm Dipsacus Teasle
- 15 gm Chaenomelis (spleen tonic)
- 15 gm Pyritium (copper)
- 15 gms Bone extract
- 15 gm Dong quai
- 15 gms Drynaria
- 24 gms Rosebud
- 15 gm Angelica DuHuo
• Herbs can be ground or made into a tincture, then added to combo of oil and bees wax to make ointment

• Can be ground and mixed with clay, green tea or egg whites to adhere to afflicted area{s}

• Use if joint is more painful in cold and damp weather

• Use after all signs of acute inflammation are gone

• Use if heat feels good on injury
Internal pills after an ACUTE injury
Huo Luo Xiao Ling Dan
(Fantastically Effective Pill to Invigorate the Collaterals)

• Radix Angelicae sinensi

• Radix Salviae miltiorrhizae

• Resina Olibani (Boswellia spp.)

• Resina Myrrha (Commiphora momol)
DrZ’s Version
ORAL TCM TRAUMA AND PAIN PILLS

• 10 gm Dong qui
• 10 gm Radix ligusticum
• 20 gm Boswellia
• 10 gm Myrrha
• 10 gm Curcuma
• 10 gms San Qi
• 20 gm Erythrina
• 20 gm Corydalis
• 10 gm Pyritium
• 10 gm Achyranthes
• 10 gm Cinnamon
Natural Alternative’s Bone Curing Powder

- 30 gm He shou wu
- 30 gm Erythrina
- 15 gm Chinese lovage root
- 15 gm White peony root
- 15 gms Rehmannia, cooked
- 15 gms Eucommia
- 30 gm Eleuthero
- 45 gm Drynaria
- 15 gm Bone meal

Take during entire bone knitting process after fracture or severe bone bruise
Alternate with comfrey

- 60 gm Dipsacus
- 30 gm Dodder
- 30 gm Dan shen sage
- 15 gm Quince fruit or bitter orange
- 75 gm Achyranthes
- 15 gm Astragalus
- 15 gm Dang shen - poor man’s ginseng
- Grind into powder, take as tincture or
- Mix with cocoa powder, honey, stevia, almond butter, roll into 30 Herbal orbs (like zoom balls)
- Sig: enjoy one per day
Cooling First AID Liniment for any trauma
alternate use with San huang San

- Rhizoma rhei
- Fructus gardenia
- Flos carthami (safflower)
- Cortex phellodendron
- Resina myrrha
- Gummi Olibaum (Boswellia/Frankincense)

- Sanguis draconis
- Fructus liquidambar
- Radix Angelica sinensis (Dong kwei)
- Cortex Erythrina spp. (Hai tong pi)

EQUAL PARTS
make tincture
Z’s Stalactite Powder for Bone Spurs associated with osteoarthritis

- 30 grams Rehmannia, cooked Shu Di Huang
- 30 grams Herba Pyrolae Rotundifolia
- 30 grams Rhizoma Drynaria (Gu Sui Bu)
- 30 grams Cistanches Ru Cong Rong
- 30 grams Milletia Ji Xue Teng
- 30 grams Yon Yang Huo
- 30 grams Radish seed
- 30 grams Dipsacus (teasel) Xu Duan
Huo Luo Xiao Ling Dan
(Fantastically Effective Pill to Invigorate the Collaterals)

- Radix Angelicae sinensi
- Radix Salviae miltiorrhizae
- Resina Olibani (Boswellia spp.)
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- 10 gm Dong qui
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- 30 gm Eleuthero
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- 15 gm Bone meal

Take during entire bone knitting process after fracture

- 60 gm Dipsacus
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- 75 gm Achyranthus
- 15 gm Astragalus
- 15 gm Dang shen - poor man’s ginseng
- Grind into powder, take as tincture or
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Stalactite Powder for Bone Spurs

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- 30 grams Milletia Ji Xue Teng
- 30 grams Yon Yang Huo
- 30 grams Radish seed
- 30 grams Dipsacus (teasel) Xu Duan
Chronic Sinew Injuries
Frozen Shoulder

Case 1
Frozen Shoulder

• 50 year old man slipped/fell on black ice, extended arm to try to break fall injured shoulder
• MRI showed torn rotator cuff
• Pursued allopathic treatment with ice, NSAIDS, NSAID crème, and after inflammation subsided, started PT
• Unresolved and diagnosed with frozen shoulder
Frozen Shoulder

- He received therapy, but quit due to scheduling
- His condition deteriorated and he developed adhesive capsulitis or frozen shoulder
Frozen Shoulder

- Syndrome in which a stiff shoulder is restricted and painful in both active and passive movement

- Also known as “adhesive capsulitis”, “periarthritis” and “pericapsulitis”
Frozen Shoulder Etiology

- Involved joints are the scapulothoracic and glenohumeral.
- There is no bony ankylosis.
- Causes include any type of pain in shoulder upon movement and immobilization from shoulder injury.
- Frozen shoulder is seen most often in patients with tendency to tension, anxiety and passive apathy (termed the “periarthritic personality”), combined with a low pain tolerance.
- Pathology of frozen shoulder is believed to be as follows:
  - Pain in shoulder (neurologic, vascular, musculoskeletal or referred visceral) causes vasospasm.
  - Vasospasm leads to congestion and myospasm.
  - Myospasm leads to disuse and further vascular congestion.
  - Initiates development of fibrous tissue that is responsible for functional disability.
Frozen Shoulder Course/Prognosis:

- Untreated course ends in total immobilization of shoulder joint
- Prevention is best treatment
- Once condition is established, cure becomes increasingly difficult for conventional treatment
- Conventional treatment consists of drug therapy (muscle relaxants, sedatives, tranquilizers, analgesics), manipulation of the shoulder, passive and active ROM exercises, ice, physiotherapy and psychological counseling to dispel any anxiety and dependency that may be primary or secondary to the frozen shoulder
Allopathic management involves manipulation of joint under anesthesia to “unfreeze” joint and “start from scratch”...

Manipulation stretches and tears scar tissue inside and around the glenohumeral joint, allowing more shoulder movement.
Frozen Shoulder Natural Approach

• The Chinese call frozen shoulder **50 year old shoulder**, because it is more common in patients who are less active than younger patients athletes or younger people injuring their shoulder.

• Full range of motion must be restored or arthritis can ensue where cartilage starves due to improper on-loading and off loading and concomitant lack of Blood/Qi/nutrients delivered by suboptimal circulation to joint and subchondral bone.
Frozen Shoulder Exercises

- Dumb bell flies with elastic bands
- Bent over rowing with elastic bands, then light weights
- Wall crawling exercises
- Hold a bar or branch and squat exercises
- Slow flying/flapping movements
- Big circles clockwise and counterclockwise in many planes or vectors
Pendulum Stretch

Towel Stretch

Finger Walk

Cross Body Reach

Armpit Stretch

Outward Rotation

Inward Rotation

http://www.health.harvard.edu/shoulders/stretching-exercises-frozen-shoulder
Frozen Shoulder Nutrients

Begin using amino acids which heal connective tissue:

- doses are po ic
  - Lysine 3 grams per day
  - Threonine 3-5 grams per day
  - Proline 3 grams
  - NAG 3 grams (Ultimate glucosamine brand)
  - Glycine 3 grams per day
  - Time released arginine can really help perfuse area by releasing NO and delivering blood to the area
Frozen Shoulder Nutrients

Patient began using following nutrients to promote healing:

**Supplements per day:**

- **Vitamin C** → Supports connective tissue → 3 grams
- **Vitamin E mixed** → elasticity of tissue → 1,200
- **Calcium** → 1,000 mg
- **Magnesium** → myriad of reactions → 1,000 mg
- **BioSil Liq (choline-stabilized orthosilicic acid)** → Needed to form Glycosaminos & elastin → Dose 2 capsule BID 10 mg dose
- **Boron** → enhances steroidal hormones and accelerates healing
  - Dose → 3 mg BID
- **Selenium** → blocks leukotrienes & thromboxanes →
  - Dose → 400 mcg per day
- **Manganese** → needed for tendon and ligament strength
  - Therapeutic dose → 10 mg per day
- **Zinc** → 30 mg per day
Frozen Shoulder Enzymes

Key Ingredients to look for:

• Enteric-coated **Serrapeptase** (phthalate Free): a fibrinolytic enzyme
• **Bromelain**: derived from pineapple, supports blood circulation by breaking down fibrin
• **Papain**: derived from papaya, supports protein digestion and the body’s natural immune response
• **Lipase**: used systemically, supports break down fats into essential fatty acids. Supports healthy circulation
• **Amylase**: for added synergistic support; breaks down carbohydrates and starches (found in human tissue) into simple sugars
• **Rutin**: acts as a repairman supporting circulation. Supports against free radicals and a healthy response to inflammation
• **Amla**: natural source of vitamin C, supports immune response

Example of Enzyme Formula
Western Herbs

- Enfla-mend Px
- Dose for chronic injury
- 3 BID po ic
- Ic (no food) is important because you want the Bromelain to degrade scar tissue

### Supplement Facts

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boswellia extract, 65% boswellic acid (Boswellia serrata)</td>
<td>600 mg</td>
<td>†</td>
</tr>
<tr>
<td>California Poppy (Eschscholzia californica)</td>
<td>375 mg</td>
<td>†</td>
</tr>
<tr>
<td>Organic Turmeric Root, 4% curcuminoid, volatile oil</td>
<td>300 mg</td>
<td>†</td>
</tr>
<tr>
<td>Turmeric (Meriva®) Phytosome™, 95% curcuminoids</td>
<td>300 mg</td>
<td>†</td>
</tr>
<tr>
<td>Bromelain 2000 GDU (Ananas comosus)</td>
<td>225 mg</td>
<td>†</td>
</tr>
<tr>
<td>Quercetin</td>
<td>75 mg</td>
<td>†</td>
</tr>
<tr>
<td>Resveratrol</td>
<td>75 mg</td>
<td>†</td>
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<tr>
<td>Black Pepper extract, 95% Piperine</td>
<td>7.5 mg</td>
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**Minimum Constituent BioMarker Per Dose**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Boswellic Acid</td>
<td>312 mg</td>
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<tr>
<td>Curcuminoids</td>
<td>60 mg</td>
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<tr>
<td>Piperine</td>
<td>6 mg</td>
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</tbody>
</table>

Other Ingredients: Vegetable Capsule (cellulose)

MERIVA®

BIOAVAILABLE CURCUMIN
Frozen Shoulder

- Dr Bastyr was a gifted ND and DC
- Excelled in Physical medicine

He recommended iontophoresis: along with vinegar tinctures
- calcium, chlorine for capsulitis
- Interferential TENS: analgesia
Frozen Shoulder Iontophoresis

**Description**

ActivaDose II Single Channel Iontophoresis Delivery Unit is indicated for the administration of soluble salts or other drugs into the body for medical purposes as an alternative to hypodermic injection in situations when it is advisable to avoid the pain that may accompany needle insertion and drug injection, when it is advisable to minimize the infiltration of carrier fluids, or to avoid the damage caused by needle insertion when tissue is traumatized.
Frozen Shoulder Electrotherapy

**Low Frequency Currents**

7. Precaution must be taken to prevent any burning. Use talcum powder if erythema is seen after treatment.

**Commonly used Ions and their Indications for Use**

**Positive Ions**
1. Hydrocortisone: Used for its anti-inflammatory effects in conditions like rheumatoid arthritis, tendinitis, bursitis, etc.
2. Calcium chloride: Calcium ions are used. It is found effective in stiff joint and post-traumatic pains.
3. Zinc oxide: Used in cases of ulcers and open lesions, has property of healing.
4. Magnesium oxide: Used in arthritis, is an excellent muscle relaxant, good vasodilator and mild analgesic.
5. Dexamethasone: Used for treating musculoskeletal inflammatory conditions.

**Negative Ions**
1. Iodine: It is an effective sclerolytic agent, an excellent bacteriocidal and a fair vasodilator. Effectively use for adherent scars, adhesive [capsulitis](#).
2. Chlorine: Also an effective sclerolytic agent, useful for scar tissue, keloides and burns.
4. Sodium or potassium citrate – Effective in rheumatoid arthritis.

   Either +/- tap water: Used in the cases of hyperhidrosis (excessive sweating). Glycopyrronium bromide is also used along with tap water in the cases hyperhidrosis.

   **Safety and precaution:** Anticholinergic compounds have an atropine-like action, therefore, patients may feel drying of mouth and throat. The patient may feel restriction of general body sweating and therefore advised not to go for any strenuous activities, which may require sweating.

**Transcutaneous Electrical Nerve Stimulation**

[Image of textbook cover]
Dr Bastyr recommended several homeopathic remedies for frozen shoulder, to help overall, and to dissolve scar tissue.

- **Bryonia**: pain and lameness with motion, followed by *ledum* and *guiacum*.
- **Thiosinaminum, Silica, Calc fluor, Ruta**: dissolve scar tissue.
- **Ranunculous bulbosum**: sharp pain.

Ranunculous bulbosum pictured above.

Use low potency & alternate Thio, Cal fluor and Ruta.
Frozen Shoulder Topical

Dr Bastyr’s topical formula

– Gaultheria procumbens (oil) [1 dr]
– Hypericum perforatum (oil) [3 ½ dr]
– Arnica montana (toxic oil) [3 ½ dr]

mix all together and apply locally
Frozen Shoulder Topical

Topical Monkshood & the Eclectics

- The famous Eclectic MD, Dr. Ellingwood also found that it could be extremely useful in the relief of acute pain and suggests, “Perhaps the most immediate influence obtainable in acute pain is to put 5 drops each of Chloroform, Menthol and Aconite into the palm of the hand and hold it over the seat of pain for 2-3 minutes. The effect is instantaneous and marvelous.”

Aconite numbs pain and allows for the manipulation of the joint without injected anesthesia

Dr. Z uses this formula when aggressively working on arm

In lieu of chloroform, substitute oils of Gaultheria, Pimento diocia, and camphor crystals
TCM Topical Soak for Frozen Shoulder and all Chronic Conditions

Ingredients
• Ding Xang → Clove flower bud
• Xiao Hui Xiang → Semen Fennel
• Da Huang → Radix Rhubarb
• Bai Zhi → Angelica dahurica
• Hong Hua → Safflower
  Cao Wu → Aconitum wild
• Chuan Wu → Aconitum, grown
• Pu Gong Yin → Taraxacum
• Tian Nan Xing -> Rhizoma arisaematis (Jack in the pulpit) Preparatum
• Ru Xiang → Ru Xiang (Frankincense)
• Mo Yao → Myrrh
• Zhi Zi → Gardenia Fruit

Use Soak 3 times per week, for several hours
Frozen Shoulder Topical Plaster

- The patient progressed from soaks to Kou Pi plaster because he seemed worse from cold damp weather.
- This plaster is loaded with ginger and other warming herbs.
Frozen Shoulder Internal
TCM formulas

Dr Z’s homemade

“fix what has been broken tincture”

1 tsp 3 Times per day
FROZEN SHOULDER DR Z TCM FORMULA
useful for musculoskeletal challenges
Frozen Shoulder Conclusion

- Has regained full range of motion
- Quarterbacked during a New Year’s day football game with family
- Limited negative sequelae the day after
- Still hears some clunking noises in joint
- Continues to improve daily
Case 2: Fracture of Hand

- A 45 year old man fractures his hand breaking wood during a Karate belt test; in Feb
- Has a clean break of his 5\textsuperscript{th} metacarpal commonly known as \textit{Boxer’s Fracture}
Fracture of Hand

• Bone was displaced: correct anatomical alignment of bone was not maintained
• Patient presented to hand specialist who manipulated it (Painful!!) splinted it, braced it
• Patient was advised to immobilize hand and wear splint or face surgery with pinning & longer infirmity & recovery
• Patient needed to use hand in one month for a vigorous hiking trip which would involve grasping trees
• Allopath said it would never happen and to cancel trip as these fractures take 8 weeks to form callous and need to stay immobilized
Fracture of Hand

PROTOCOL:
- Nutritional therapy
- Physical medicine & Hydrotherapy
- TCM herbal therapy regime, both topical & internal
  - Western herbal Poultices
- Acupuncture
- Homeopathy
- No allopathic medicine was used in the case
Fracture of Hand

**Amino acids** - heal connective tissue:
doses are po ic

- Lysine 3 grams per day
- Threonine 3-5 grams per day
- Proline 3 grams
- NAG 3 grams (Ultimate glucosamine brand)
- Glycine 3 grams per day
- Time released arginine can help perfuse area by releasing NO and delivering blood to area
Fracture of Hand

VITAMINS and MINERALS

- Vitamin B complex
- Vitamin B-6 15 mg QD
- Vitamin C 3 g QD
- Vitamin D 5000 IU QD
- Vitamin K2 20 mg QD
- Calcium 1500 mg QD
- Magnesium 500 mg QD
- Zinc 50 mg QD
- Boron 10 mg QD
- Silica 5 mg QD
# Fracture of Hand

Bone morphogenic osteoinductive proteins

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## Osteogenic Activity of the Fourteen Types of Human Bone Morphogenetic Proteins (BMPs)

Hwongwei Cheng, MD, PhD, Wei Jiang, BA; Frank M. Phillips, MD; Rex C. Heydon, MD, PhD; Ying Peng, MD, Lan Zhou, MD, PhD; Hue H. Luu, MD; Nall An, MD; Benjamin Breyer, MD; Pantula Vanichakam, BS; Jan Paul Szatkowski, BS; Jae Yoon Park, BS; Tong-Chuan He, MD, PhD

*J Bone Joint Surg Am, 2003 Aug; 85 (8): 1544-1552*

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<table>
<thead>
<tr>
<th>BMP</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMP-2</td>
<td>osteoinductive, osteoblast differentiation, apoptosis</td>
</tr>
<tr>
<td>BMP-3 (osteogenin)</td>
<td>most abundant BMP in bone, inhibits osteogenesis</td>
</tr>
<tr>
<td>BMPs</td>
<td></td>
</tr>
<tr>
<td>BMP-4</td>
<td>osteoinductive, lung &amp; eye development</td>
</tr>
<tr>
<td>BMP-5</td>
<td>chondrogenesis</td>
</tr>
<tr>
<td>BMP-6</td>
<td>osteoblast differentiation, chondrogenesis</td>
</tr>
<tr>
<td>BMP-7 (OP-1)</td>
<td>osteoinductive, development of kidney &amp; eye</td>
</tr>
<tr>
<td>BMP-8 (OP-1)</td>
<td>osteoinductive</td>
</tr>
<tr>
<td>BMP-9</td>
<td>nervous system, hepatic reticuloendothelial system, hepatogenesis</td>
</tr>
<tr>
<td>BMP-10</td>
<td>cardiac development</td>
</tr>
<tr>
<td>BMP-11 (GDF-8, myostatin)</td>
<td>patterning mesodermal &amp; neuronal tissues</td>
</tr>
<tr>
<td>BMP-12 (GDF-7)</td>
<td>induces tendon-iliac tissue formation</td>
</tr>
<tr>
<td>BMP-13 (GDF-6)</td>
<td>induces tendon &amp; ligament-like tissue formation</td>
</tr>
<tr>
<td>BMP-14 (GDF-5)</td>
<td>chondrogenesis, enhances tendon healing &amp; bone formation</td>
</tr>
<tr>
<td>BMP-15</td>
<td>modifies follicle-stimulating hormone activity</td>
</tr>
</tbody>
</table>

* GDF = growth/differentiation factor.

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Source: Neurosurg Focus © 2002 American Association of Neurological Surgeons
Bone healing in 2016.
Buza JA 3rd1, Einhorn T1.

Abstract
Delayed fracture healing and nonunion occurs in up to 5-10% of all fractures, and can present a challenging clinical scenario for the treating physician. Methods for the enhancement of skeletal repair may benefit patients that are at risk of, or have experienced, delayed healing or nonunion. These methods can be categorized into either physical stimulation therapies or biological therapies. Physical stimulation therapies include electrical stimulation, low-intensity pulsed ultrasonography, or extracorporeal shock wave therapy. Biological therapies can be further classified into local or systemic therapy based on the method of delivery. Local methods include autologous bone marrow, autologous bone graft, fibroblast growth factor-2, platelet-rich plasma, platelet-derived growth factor, and bone morphogenetic proteins. Systemic therapies include parathyroid hormone and bisphosphonates. This article reviews the current applications and supporting evidence for the use of these therapies in the enhancement of fracture healing.

KEYWORDS: bone defects; fracture; growth factors; healing; nonunion

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Fracture of Hand

Physiotherapy

• Passive exercise: for each joint on either side of fracture begin as soon as possible within limits of pain
• Active exercise: same as for passive
• Don’t over do it: be cautious of creating muscle spasms
• Water exercises: lower extremities for stress fracture
• Massage: part of limb not in cast, daily, then affected part as soon as possible, always stroke toward heart
• TENS (analgesia)
• Microcurrent: for non-union, non-healing fractures
Fracture of Hand

Hydrotherapy

• Hot fomentation before cast
• *Alternating hot and cold compresses as soon as possible after cast removal, on other limb while cast is on*
• Whirlpool baths
• We were fortunate patient didn’t have a permanent cast
**Fracture Western Topical Botanicals**

This Patient protocol in BOLD

- **Equisetum arvense**: foot bath; for chronic swelling often persisting after ankle fracture use vinegar tincture;
- **Eupatorium perfoliatum**: deep-seated muscle pain close to the bone
- **Hypericum perforatum** (oil): topically, if cast is removable
- **Piscidia erythrina** topical and oral pain of fracture where opioid would be effective but poorly tolerated
- **Symphytum officinale** (toxic): internally, use 4X,
  - sleep with poultice is key to success
    - acute; externally, ground herb in flax seed meal as cool poultice
    - later stages, as hot poultice
Fracture TCM Topical Botanicals

ACUTE PHASE:

- San huang san with green tea poultice daily or San qi/Yunnan bai yao patch
- Dit Da Jow liq/Trauma liniment- soak cloth and tie around area with ace bandage, then put on brace
- Comfrey poultice at night

In this case, the immobilizing brace was removable
Fracture TCM Topical Botanicals

**Sinew Bone Gao (poultice)**

3 grams *chuan wu* Radix aconiti carmichaeli (Sichuan aconite)
3 grams *cao wu* Radix aconiti kusnezoffii (wild aconite)
15 grams *bai zhi* Radix angelicae dahurica
6 grams *Radix aucklandia* (costus root)
9 grams *hou pu* Cortex magnoliae officinalis (magnolia bark)
9 grams *xiao hui xiang* Fructus goeniculii vulgar1: (fennel)
9 grams *rou gui* Cortex cinnamomum cassia (cinnamon bark)
15 grams *ru xiang* Gummi olibanum (frankincense)
15 grams *mo yao* Myrrha (myrrh)
15 grams *xue jie* Sanguis draconis (dragon’s blood)
15 grams *qiang huao* Rhizoma et Radix notoptergii
15 grams *duhuo* Radix angelica pubescent:
15 grams *xiang fu* Rhizoma cyperi rotundi (cyperus tuber)
15 grams *niu xi* Radix achyranthis bidentatae
15 grams *xu duan* Radix dipsacus (teasel root)
15 grams *zi ran tong* Pyritium (pyrite)
15 grams *mu gua* Fructus chaenomelis
90 grams *gu sui bu* Drynaria
   30 grams *tu bie chong*
   15 grams *san qi*
24 grams *tang qui* Radix angelicae sinensis (tang kuei)
15 grams *zi jing pi* Cortex cercis chinensis (rosebud bark)
Fracture TCM Internal Botanicals

[Image of Two Products]

- **Seven Forests**
  - *Drynaria 12*
  - Bu Yang Huo Xue Pian
  - 70 g - 100 tablets/700 mg each

- **Kamwo**
  - Zheng Gu Tui Na
  - Chinese Medical Massage
  - Bone Knitting Pill - Late Stage
  - Net Wt. 3.2 Oz. (90 grams)

[acuatlanta.net]
### The Herbs of Drynaria 12

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
<th>Chinese Name</th>
<th>Primary Indications for Use in the Chinese Herbal System*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drynaria</td>
<td><em>Drynaria fortunei</em></td>
<td><em>Gusuibu</em></td>
<td>pain in hips, knees, tendons, and bones; traumatic injury</td>
</tr>
<tr>
<td>Dipsacus</td>
<td><em>Dipsacus asper</em></td>
<td><em>Xuduan</em></td>
<td>broken bone, traumatic injury, low back pain</td>
</tr>
<tr>
<td>Rehmannia</td>
<td><em>Rehmannia glutinosa</em></td>
<td><em>Shudihuang</em></td>
<td>debilitated back and knees, fatigue, anemia</td>
</tr>
<tr>
<td>Astragalus</td>
<td><em>Astragalus membranaceus</em></td>
<td><em>Huangqi</em></td>
<td>deficiency of qi and yang</td>
</tr>
<tr>
<td>Millettia</td>
<td><em>Millettia nitida</em></td>
<td><em>Jixueteng</em></td>
<td>numb pain in back and knees</td>
</tr>
<tr>
<td>Tang-kuei</td>
<td><em>Angelica sinensis</em></td>
<td><em>Danggui</em></td>
<td>blood stagnation and deficiency</td>
</tr>
<tr>
<td>Achyranthes</td>
<td><em>Achyranthes bidentata</em></td>
<td><em>Niushi</em></td>
<td>pain of the back, knees, and bones</td>
</tr>
<tr>
<td>Eucommia</td>
<td><em>Eucommia ulmoides</em></td>
<td><em>Duzhong</em></td>
<td>pain of the hips and knees</td>
</tr>
<tr>
<td>Deer antler</td>
<td><em>Cervus nippon</em></td>
<td><em>Lurong</em></td>
<td>pain of the waist and knees</td>
</tr>
<tr>
<td>Cnidium</td>
<td><em>Ligusticum chuanxiong</em></td>
<td><em>Chuanxiong</em></td>
<td>vitalize blood circulation, control pain</td>
</tr>
<tr>
<td>Pine node</td>
<td><em>Pinus sp.</em></td>
<td><em>Songjia</em></td>
<td>alleviates pain of joints and muscles, relaxes tendons</td>
</tr>
<tr>
<td>Tu-huo</td>
<td><em>Angelica pubescens</em></td>
<td><em>Duhuo</em></td>
<td>pain of the hips and knees</td>
</tr>
</tbody>
</table>
Fracture Conclusion

- After 3 weeks, hand specialist was “stunned” at progress made and patient was able to take the hiking trip
- The hiking and holding walking stick acted as physiotherapy for patient
- Fracture was well approximated, but not as perfect as if it were pinned, but patient was assured the calloused bone would be stronger than before fracture and he would avoid boxing fractures if he continues to break in his martial arts career
Case 3: DeQuervain’s

- A 54 year old man developed pain in medial wrist and thumb joint with adduction after holding a weed whacker with right hand for hours doing Spring clean up.
- Diagnosed by orthopedic as DeQuervain’s syndrome.
De Quervain's Tenosynovitis

De Quervain's Tenosynovitis occurs when the tendon sheath on the thumb side of your wrist becomes irritated and inflamed from overuse, making it difficult to move your thumb and wrist. Repetitive motions of the wrist, thumb and hand are usually involved in the development of De Quervain's. If you leave De Quervain's Tenosynovitis untreated for long enough, your pain will spread all the way down your forearm and movement of your thumb and wrist will become limited even further. While resting the hand will help to heal your De Quervain's, resting it completely is nearly impossible.

DeQuervain’s

- In 1895, a Swiss surgeon, Fritz de Quervain published five case reports of patients with a tender, thickened first dorsal compartment at the wrist. Condition has subsequently borne his name, de Quervain tenosynovitis.
- De Quervain's tenosynovitis (dih-kwer-Vains) is a painful condition affecting tendons on thumb side of wrist.
- De Quervain's tenosynovitis hurts when turning wrist, grasping anything or making a fist.
- Although exact cause of de Quervain's tenosynovitis isn't known, any activity that relies on repetitive hand or wrist movement, such as working in garden, playing golf or racket sports, lifting your baby, or using a cell phone can make it worse.
DeQuervain’s

- Tendons of abductor pollicis longus and extensor pollicis brevis are tightly secured against radial styloid by overlying extensor retinaculum
- Any thickening of tendons from acute or repetitive trauma restrains gliding of tendons through the sheath
- Efforts at thumb motion, especially when combined with radial or ulnar deviation of wrist, cause pain and perpetuate inflammation and swelling
DeQuervain’s
Finklestein’s orthopedic test confirms the diagnosis and elicits sharp shooting electric pains

Finklestein’s orthopedic test confirms the diagnosis and elicits sharp shooting electric pains
DeQuervain’s Conventional Therapy

- Allopath offered cortisone injections and surgery as the only treatment options
- Patient declined and sought Naturopathic management at University of Bridgeport College of Naturopathic Medicine with DrZ
DeQuervain’s Natural Interventions

Combination therapy:
- Rest
- Nutritional therapy
- Physical medicine
- Botanicals, Western & TCM
- Homeopathy
- No allopathic medicine was used in the case
DeQuervain’s

**Amino acids** - heal connective tissue:

Doses are: 

- **Lysine**: 3 grams per day
- **Threonine**: 3-5 grams per day
- **Proline**: 3 grams
- **NAG**: 3 grams (Ultimate glucosamine brand)
- **Glycine**: 3 grams per day
- Time released arginine can help perfuse the area by releasing NO and delivering blood to area
# DeQuervain’s

## VITAMINS and MINERALS

<table>
<thead>
<tr>
<th>Vitamin/Mineral</th>
<th>Quantity</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin B complex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin B-6</td>
<td>15 mg</td>
<td>QD</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>3 g</td>
<td>QD</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>5000 IU</td>
<td>QD</td>
</tr>
<tr>
<td>Vitamin K2</td>
<td>20 mg</td>
<td>QD</td>
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<tr>
<td>Calcium</td>
<td>1500 mg</td>
<td>QD</td>
</tr>
<tr>
<td>Magnesium</td>
<td>500 mg</td>
<td>QD</td>
</tr>
<tr>
<td>Zinc</td>
<td>50 mg</td>
<td>QD</td>
</tr>
<tr>
<td>Boron</td>
<td>10 mg</td>
<td>QD</td>
</tr>
<tr>
<td>Silica</td>
<td>5 mg</td>
<td>QD</td>
</tr>
</tbody>
</table>
DeQuervain’s

Nutrients to promote healing:

Supplements per day:
- Vitamin C → Supports connective tissue → 3 grams
- Vitamin E mixed → elasticity of tissue → 1,200
- Calcium → 1,000 mg
- Magnesium → myriad of reactions → 1,000 mg
- BioSil Liq (choline-stabilized orthosilicic acid) → needed to form Glycosaminos & elastin → Dose 2 capsule BID 10 mg dose
- Boron → enhances steroidal hormones and accelerates healing
  - Dose → 3 mg BID
- Selenium → blocks leukotrienes & thromboxanes →
  - Dose → 400 mcg per day
- Manganese → needed for tendon and ligament strength
  - Therapeutic dose → 10 mg per day
- Zinc → 30 mg per day
Cold laser therapy
3 X per week.

Treated with Carpel tunnel dose
2 joules per point.

### DeQuervain’s Physical Medicine

#### Recommended treatment doses for Low Level Laser Therapy

**Laser class 3B, 904 nm GaAs Lasers**

(Peak pulse output >1 Watt, mean output >5 mW and power density > 5mW/cm²)

Irradiation times should range between 30 and 600 seconds

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Min. area/points</th>
<th>Min. total dose</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpal-tunnel</td>
<td>2-3</td>
<td>4</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Lateral epicondylitis</td>
<td>2-3</td>
<td>2</td>
<td>Maximum 100mW/cm²</td>
</tr>
<tr>
<td>Biceps humeri cap.long.</td>
<td>2-3</td>
<td>2</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Supraspinatus</td>
<td>2-3</td>
<td>4</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Infraspinatus</td>
<td>2-3</td>
<td>4</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Trochanter major</td>
<td>2-3</td>
<td>2</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Patellartendon</td>
<td>2-3</td>
<td>2</td>
<td>Maximum 100mW/cm²</td>
</tr>
<tr>
<td>Tract. Iliotibialis</td>
<td>2-3</td>
<td>2</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Achilles tendon</td>
<td>2-3</td>
<td>2</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Plantar fascitis</td>
<td>2-3</td>
<td>4</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td><strong>Arthritis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finger PIP or MCP</td>
<td>1-2</td>
<td>1</td>
<td>Joules 904nm</td>
</tr>
<tr>
<td>Wrist</td>
<td>2-3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Humeroradial joint</td>
<td>2-3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Elbow</td>
<td>2-3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Glenohumeral joint</td>
<td>2-3</td>
<td>2</td>
<td>Minimum 1 Joules per point</td>
</tr>
<tr>
<td>Acromioclavicular</td>
<td>2-3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Temporomandibular</td>
<td>2-3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Cervical spine</td>
<td>4</td>
<td>4</td>
<td>Minimum 1 Joules per point</td>
</tr>
<tr>
<td>Lumbar spine</td>
<td>4</td>
<td>4</td>
<td>Minimum 1 Joules per point</td>
</tr>
<tr>
<td>Hip</td>
<td>2</td>
<td>4</td>
<td>Minimum 2 Joules per point</td>
</tr>
<tr>
<td>Knee anteromedial</td>
<td>4-6</td>
<td>4</td>
<td>Minimum 1 Joules per point</td>
</tr>
<tr>
<td>Ankle</td>
<td>2-4</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
DeQuervain’s Physical Medicine
Cold Laser

According to current FDA standards, an FDA cleared cold lasers can be sold for 3 main issues:

• Pain control
• Inflammation reduction
• Increased blood flow
The mechanistic basis for photobiomodulation therapy of neuropathic pain by near infrared laser light.

Holanda VM¹,², Chavantes MC¹,³, Wu X, Anders JJ⁴.

Abstract

BACKGROUND AND OBJECTIVE: Various irradiances have been reported to be beneficial for the treatment of neuropathic pain with near infrared light. However, the mechanistic basis for the beneficial outcomes may vary based on the level of irradiance or fluence rate used. Using in vivo and in vitro experimental models, this study determined the mechanistic basis of photobiomodulation therapy (PBMT) for the treatment of neuropathic pain using a high irradiance.

STUDY DESIGN/MATERIALS AND METHODS: In vitro experiments: Cultured, rat DRG were randomly assigned to control or laser treatment (LT) groups with different irradiation times (2, 5, 30, 60, or 120 seconds). The laser parameters were: output power = 960 mW, irradiance = 300 mW/cm², 808 nm wavelength, and spot size = 3 cm diameter/area = 7.07 cm², with different fluences according to irradiation times. Mitochondrial metabolic activity was measured with the MTS assay. The DRG neurons were immunostained using a primary antibody to β-Tubulin III. In vivo experiments: spared nerve injury surgery (SNI), an animal model of persistent peripheral neuropathic pain, was used. The injured rats were randomly divided into three groups (n = 5). (i) Control: SNI without LT; (ii) Short term: SNI with LT on day 7 and euthanized on day 7; (iii) Long term: SNI with LT on day 7 and euthanized on day 22. An 808 nm wavelength laser was used for all treatment groups. Treatment was performed once on day 7 post-surgery. The transcutaneous treatment parameters were: output power: 10 W, fluence rate: 270 mW/cm², treatment time: 120 seconds. The laser probe was moved along the course of the sciatic/sural nerve during the treatment. Within 1 hour of irradiation, behavior tests were performed to assess its immediate effect on sensory allodynia and hyperalgesia caused by SNI.

RESULTS: In vitro experiments: Mitochondrial metabolism was significantly lower compared to controls for all LT groups. Varicosities and undulations formed in neurites of DRG neurons with a cell body diameter 30 μm or less. In neurites of DRG neurons with a cell body diameter of greater than 30 μm, varicosities formed only in the 120 seconds group. In vivo experiments: For heat hyperalgesia, there was a statistically significant reduction in sensitivity to the heat stimulus compared to the measurements done on day 7 prior to LT. A decrease in the sensitivity to the heat stimulus was found in the LT groups compared to the control group on days 15 and 21. For cold allodynia and mechanical hyperalgesia, a significant decrease in sensitivity to cold and pin prick was found within 1 hour after LT. Sensitivity to these stimuli returned to the control levels after 5 days post-LT. No significant difference was found in mechanical allodynia between control and LT groups for all time points examined.

CONCLUSION: These in vitro and in vivo studies indicate that treatment with an irradiance/fluence rate at 270 mW/cm² or higher at the level of the nerve can rapidly block pain transmission. A combination therapy is proposed to treat neuropathic pain with initial high irradiance/fluence rates for fast pain relief, followed by low irradiance/fluence rates for prolonged pain relief by altering chronic inflammation.
Western Herbs

Supplement Facts

Serving Size: 3 capsules  Servings per Container: 25

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boswellia extract, 65% boswellic acid (Boswellia serrata)</td>
<td>600 mg</td>
<td>†</td>
</tr>
<tr>
<td>California Poppy (Eschscholzia californica)</td>
<td>375 mg</td>
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<tr>
<td>Organic Turmeric Root, 4% curcuminoid, volatile oil</td>
<td>300 mg</td>
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</tr>
<tr>
<td>Turmeric (Meriva™) Phytosome™, 95% curcuminoids</td>
<td>300 mg</td>
<td>†</td>
</tr>
<tr>
<td>Bromelain 2000 GDU (Ananas comosus)</td>
<td>225 mg</td>
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<tr>
<td>Quercetin</td>
<td>75 mg</td>
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<tr>
<td>Resveratrol</td>
<td>75 mg</td>
<td>†</td>
</tr>
<tr>
<td>Black Pepper extract, 95% Piperine</td>
<td>7.5 mg</td>
<td>†</td>
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Minimum Constituent Biomarker Per Dose

<table>
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<tr>
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<tbody>
<tr>
<td>Boswellic Acid</td>
<td>312 mg</td>
</tr>
<tr>
<td>Curcuminoids</td>
<td>60 mg</td>
</tr>
<tr>
<td>Piperine</td>
<td>6 mg</td>
</tr>
</tbody>
</table>

All Organic Herbs are Certified Organic
† Daily Value not established

Other Ingredients: Vegetable Capsule (cellulose)
DeQuervain’s TCM – acute phase

Since patient’s tendon was warm, we began with:

• San Huang San plaster (cooling)
• Leave on for 48 hr
• Alternate with Yunnan Bai Yao plaster
• Massage on body GB 34, used to treat tendon and cartilage injuries in any part of body
DeQuervain’s DR Z TCM FORMULA useful for Musculoskeletal Challenges

For oral and topical use

DrZ’s fix what is broken PAIN tincture

For oral and topical use

In what is broken PAIN tincture

Great for pain
Great for pain
Moves stagnant blood
Moves stagnant blood
Heals cartilage ligaments and bones
Heals cartilage ligaments’ and bones
Pain and relaxation, (like J Dog Pain)

Pain
Relaxes muscles and tendons
Builds blood
Moves blood, reduces Bradykinesia
Moves blood
Anti-inflammatory
Anti-inflammatory
Driver to all meridians
DeQuervain’s Western Herbs

- Patient wrapped Hypericum/flaxseed poultice on his wrist and thumb overnight during sleep.
Repertorized case:

Wrist, shooting pain:
- Hypericum
- Aconite
- Causticum

Wrist, pain worse with warmth:
- Guaiacum

Hands, pain sharp

Thumbs, right side
- Guaiacum

- Patient alternated between Hypericum & GUAIACUM 200C potency
- 5 pellets po ic prn until change was noted, then stop Rx
DeQuervain’s Homeopathics Topical

- **Inflamyar** was chosen because it contains Guaiacum
DeQuervain’s Conclusion

• Case resolved completely in 3 weeks
• Patient was able to build up strength in area and adduct thumb without further pain or complications
• Finklestein negative test
• Avoided painful and unnecessary surgery, steroid injections and down time recovering from those procedures
Case 4
Torn meniscus/ ligaments Right knee

- This is DrZ’s injury to his right knee in 2008 while sparring black belts for a karate test and attempting a High jumping kick with the left.
- The right knee buckled and DrZ felt like an immense rubber band snapped and excruciating pain and inability to put weight on the limb.
EXAM DATE AND TIME: 03/31/2008 09:00 PM

MRI KNEE RIGHT WO CONTRAST

Multiplanar, multisequential MRI of the right knee was performed.

There is increased signal within the anterior cruciate ligament consistent with a partial interstitial tear centrally. The posterior cruciate ligament and the medial lateral collateral ligaments are intact. The popliteus tendon is unremarkable. The distal quadriceps and infrapatellar tendons are normal in signal. The patellar retinaculum is maintained.

Signal abnormality in the medial aspect of the posterior horn of the lateral meniscus extends to superior and inferior articular surfaces, consistent with tear. In addition, there is linear signal abnormality in the anterior horn of the lateral meniscus which extends to the inferior articular surface, consistent with tear. The medial meniscus is intact with mild grade 1 signal in the posterior horn.

There is slight indentation of the cortex of the lateral femoral condyle underlying marrow edema consistent with impaction injury with contusion. Associated contusion is present posteriorly in the lateral tibial plateau. A smaller contusion is present in the medial tibial plateau posteriorly as well as in the medial femoral condyle peripherally. No fracture lines are identified. There is cartilage thinning/irregularity and femoral trochlea however no discrete dramatic cartilaginous defects are identified.

There is a moderate joint effusion. A plica is noted medially.

Impression:

1. Partial interstitial ACL tear
2. Evidence of impaction injury with contusions in the femoral condyles and posterior tibial plateau, lateral greater than medial.
3. Tears of the anterior and posterior horns of the lateral meniscus.
4. Joint effusion.

CC: EUGENE ZAMPIERON ND A

Partial tear ACL
Meniscus tear
Bone bruising & trauma
This study showed that meniscal tears can heal even if left alone (in situ), from 2-16 years (mean of 6.6 years),

96% of the patients opened up again years after their acl was reconstructed had remission and healing of their meniscus cartilage with abrasion, treponation OR BEING LEFT ALONE
With this in mind, DrZ opted not to get surgery but to harness the VIS Medicatrix Naturae and see if he could heal himself with Nature.
• DrZ managed the case with a combination of
  - Nutritional therapy
  - Physical medicine
  - TCM herbal therapy regime, both topical & internal
  - Western herbs
  - Acupuncture
  - Homeopathy
  - No allopathic medicine was used in the case
Case 5 acute management

- Swelling of the knee was extreme and restricted motion
- A special knee brace was prescribed
- Bed rest and RICE
- (I elected to do 10 minutes ice massage twice per hour)
Case 5 Hypnotic sleep formula

• Because sleep was difficult due to pain
  Erythrina 5:1 (left)/Corydalis 5:1/
  Tincture of
  Piscidia/Lactuca/Indian pipe/Eschscholtzia 1:1 was prescribed orally, ½ tsp prn
TCM approach
Sprain & tendonitis acute

- The knee was warm and swollen, so I used
- 10 minute cryotherapy massage and
- then SAN HUANG SAN plaster (cooling)
- Leave on for 48 hours
- Alternate with Yunnan Bai yao plaster as well
- Massage on body GB 34, used to treat tendon and cartilage injuries in any place of the body
The knee was cupped and bleed by a TCM practitioner to remove stagnation and swelling.

After I received acupuncture regularly esp. ST 31, ST 36 and GB 34, and received moxa at ST36.
Homeopathics acute

- I stopped TCM and started topical hommacords; alternating TRAUMEEL (now T relief) and Inflamyar; rubbing and massaging QID
- I took a 10 M Arnica dose, TID po ic for 24 hours
- I switched to and remained on RUTA & Bryonia 10 M for a few weeks
Homeopathic constitutional

- I switched to silicea 10M because of the
- chronic synovitis
- the feeling that my knee was BOUND, even if my brace was off
- Weakness and loss of power in the limb
- Even today, I have not regained all of the muscle BULK in that limb, even though it is very strong, it is “skinnier” than the other limb
# Western Herbs

- **Enfla-mend Px**
- **Dose for acute injury**
- **3 QID po ic**

## Supplement Facts

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boswellia extract, 65% boswellic acid (Boswellia serrata)</td>
<td>600 mg</td>
<td>†</td>
</tr>
<tr>
<td>California Poppy (Eschscholzia californica)</td>
<td>375 mg</td>
<td>†</td>
</tr>
<tr>
<td>Organic Turmeric Root, 4% curcuminoid, volatile oil</td>
<td>300 mg</td>
<td>†</td>
</tr>
<tr>
<td>Turmeric (Meriva®)Phytosome™, 95% curcuminoids</td>
<td>300 mg</td>
<td>†</td>
</tr>
<tr>
<td>Bromelain 2000 GDU (Ananas comosus)</td>
<td>225 mg</td>
<td>†</td>
</tr>
<tr>
<td>Quercetin</td>
<td>75 mg</td>
<td>†</td>
</tr>
<tr>
<td>Resveratrol</td>
<td>75 mg</td>
<td>†</td>
</tr>
<tr>
<td>Black Pepper extract, 95% Piperine</td>
<td>7.5 mg</td>
<td>†</td>
</tr>
</tbody>
</table>

**Minimum Constituent BioMarker Per Dose**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boswellic Acid</td>
<td>312 mg</td>
</tr>
<tr>
<td>Curcuminoids</td>
<td>60 mg</td>
</tr>
<tr>
<td>Piperine</td>
<td>6 mg</td>
</tr>
</tbody>
</table>

*All Organic Herbs are Certified Organic*  
† Daily Value not established

*Other Ingredients: Vegetable Capsule (cellulose)*

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**MERIVA®**  
**BIOAVAILABLE CURCUMIN**
• Once the swelling was better (I still have some residual water on the knee some 9 years later), I began to use the sinew-bone get and get on high doses of Drynaria 12, 5 pills TID po IC.
Eastern Topical later stages of fracture

- Sinew Bone Gao(poultice)
  - 3 grams chuan wu Radix aconiti carmichaelii (Sichuan aconite)
  - 3 grams cao wu Radix aconiti kusnezoffii (wild aconite)
  - 15 gram bai zhi Radix angelicae dahurica
  - 6 grams Radix aucklandia (costus root)
  - 9 grams hou pu Cortex magnoliae officinalis (magnolia bark)
  - 9 grams xiao hui xiang Fructus goeniculi vulgar1: (fennel)
  - 9 gms rou gui Cortex cinnamomum cassia (cinnamon bark)
  - 15 15 gms ru xiang Gummi olibanum (frankincense)
  - 15 gms mo yao Myrrha (myrrh)
  - 15 gns xue jie Sanguis draconis (dragon’s blood)
  - 15 qiang huao Rhizoma et Radix notoptergii
  - 15 gms duhuo Radix angelica pubescent:
  - 15 grams xiang fu Rhizoma cyperi rotundi (cyperus tuber)
  - 15 niu xi Radix achyranthis bidentatae
  - 15 xu duan Radix dipsacus (teasel root)
  - 15 zi ran tong Pyritium (pyrite)
  - 15 mu gua Fructus chaenomelis
  - 90 grams gu sui bu Drynaria

- 30 grams tu bie chong

- 15 grams san qi
  - 24 grams tang qui Radix angelicae sinensis (tang kuei)
  - 15 grams zi jing pi Cortex cercis chinensis (rosebud bark)
Internal formulas to mend
The Herbs of Drynaria 12

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
<th>Chinese Name</th>
<th>Primary Indications for Use in the Chinese Herbal System*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drynaria</td>
<td><em>Drynaria fortunei</em></td>
<td><em>Gusuibu</em></td>
<td>pain in hips, knees, tendons, and bones; traumatic injury</td>
</tr>
<tr>
<td>Dipsacus</td>
<td><em>Dipsacus asper</em></td>
<td><em>Yuhuan</em></td>
<td>broken bone, traumatic injury, low back pain</td>
</tr>
<tr>
<td>Rehmannia</td>
<td><em>Rehmannia glutinosa</em></td>
<td><em>Shudihuang</em></td>
<td>debilitated back and knees, fatigue, anemia</td>
</tr>
<tr>
<td>Astragalus</td>
<td><em>Astragalus membranaceus</em></td>
<td><em>Huangqi</em></td>
<td>deficiency of qi and yang</td>
</tr>
<tr>
<td>Millettia</td>
<td><em>Millettia nittida</em></td>
<td><em>Jixuei</em></td>
<td>numb pain in back and knees</td>
</tr>
<tr>
<td>Tang-kuei</td>
<td><em>Angelica sinensis</em></td>
<td><em>Danggui</em></td>
<td>blood stagnation and deficiency</td>
</tr>
<tr>
<td>Achyranthes</td>
<td><em>Achyranthes bidentata</em></td>
<td><em>Niushi</em></td>
<td>pain of the back, knees, and bones</td>
</tr>
<tr>
<td>Eucommia</td>
<td><em>Eucommia ulmoides</em></td>
<td><em>Duzhong</em></td>
<td>pain of the hips and knees</td>
</tr>
<tr>
<td>Deer antler</td>
<td><em>Cervus nippon</em></td>
<td><em>Lurong</em></td>
<td>pain of the waist and knees</td>
</tr>
<tr>
<td>Cnidium</td>
<td><em>Ligusticum chuanxiong</em></td>
<td><em>Chuanxiong</em></td>
<td>vitalize blood circulation, control pain</td>
</tr>
<tr>
<td>Pine node</td>
<td><em>Pinus sp.</em></td>
<td><em>Songjie</em></td>
<td>alleviates pain of joints and muscles, relaxes tendons</td>
</tr>
<tr>
<td>Tu-huo</td>
<td><em>Angelica pubescens</em></td>
<td><em>Duhuo</em></td>
<td>pain of the hips and knees</td>
</tr>
</tbody>
</table>
• I went to Dr Peter Zilahy, DC, FABCO, trained in Orthopedics, who adjusted my fibula, knees, and body.

• We instituted whole Body Vibrational therapy, which Dr Zilahy said activated chondrocytes, and would help rehab my knee and quads which had atrophied, and help proprioception.
Whole-Body Vibration

As a therapy, whole-body vibration (WBV) was explored by Russian scientist Vladimir Nazarov who tested vibration on astronauts in an effort to decrease the loss of muscle and bone mass in space. Astronauts in space lose their muscular strength very quickly and the decrease of bone density increases the risk of bone fractures. Before their departure, astronauts were subjected to WBV training sessions so that the density of their bones would increase and their muscular strength would rise.

Vibration Therapy is becoming increasingly popular. Initially, vibration training was mainly used in the fitness industry, but Vibration Therapy is expanding quickly into all areas of physical medicine and rehabilitation.

Vibration Parameters

Amplitude – While all vibration devices produce vibration in three different directions – front and back (x), sideways (y), and up and down (z), the most safe and effective platforms produce sufficient vertical vibration while limiting vibration in the horizontal plane.

Frequency – Frequency (Hz) is equally important. Research shows that the body responds positively to vibration in the 30-50 Hz range.

How It Works

- Platform oscillates in the vertical plane 30-50 times per second.
- Mechanoreceptor Muscle Spindles send signals to the brain causing muscles to contract at the same rate the platform is vibrating.
- Mechanoreceptor Golgi Tendon Organs (GTO) send signals to the brain causing the muscles to relax at the rate of vibration.
- WBV results in nearly 100% motor-unit recruitment verses an average of 40% for normal voluntary exercise.
- Improved muscle strengthening, range-of-motion, flexibility, and balance & proprioception and reduced pain and muscle spasms.
- The rapid contraction and relaxation of muscles works as a pump to increase both circulation and lymphatic drainage.

Why Vforce?

- Reimbursable
- Increased referrals
- Accelerated outcomes
- Cost effective
- Minimum space required
- Easy to use
- Excellent patient compliance
Research Shows Vibration Therapy is Indicated for a Broad Range of Therapeutic Applications

- Balance and Fall Prevention
- Flexibility and Range of Motion
- General Health and Wellness
- Neuromuscular Re-Education
- Low Back Pain
- Knee Rehab
- Bone and Joint Rehab
I did many knee exercises to regain strength.
Because I healed with adhesions, and still had bain in the fibula region, Dr. Zilahy recommended THE STICK to be done several times per day.

This is a self-help type of Graston therapy.
Conclusion and resolution

- I was back to Karate in 6 months, although I braced both knees (one for the injury, one for prevention)
- Dr Zilahy prescribed orthotics which have really helped as well
- He ran some blood work and found out that my DHEA was “LOW NORMAL” so he prescribed DHEA which improves the KIDNEY(ADRENALS) in TCM thinking
- I continue take daily over the 9 years
  - DRYNARIA 12
  - Enflamend Px
  - All minerals indicated
  - Many adaptogens
  - Multivitamin
  - DHEA
  - Occasionally silicea
  - Inflamyar as needed

I have yet to repeat my MRI, but have little to no pain and dysfunction of the knee.

I do have residual swelling so I avoid damp foods and get moxa and acupuncture regularly