

## AUDIO LECTURES

### Graston Technique for Athletic Injuries

Thomas E. Hyde, DC, DACBSP

Dr. Thomas Hyde is a graduate of Florida State University. Upon graduation, he began a short career as a junior high school science and physical education teacher, but soon left to attend Logan College of Chiropractic. He graduated from Logan in 1977 and moved to Miami, Florida where he served as a team physician for several local high schools, worked with a local university, and spent 7 years as the team chiropractor for the Miami Dolphins. He also worked with professional athletes in basketball, baseball, golf and other sports. Dr. Hyde served as the chiropractor with the U.S. medical staff for the 1987 Pan American Games in Indianapolis, Indiana. He received his diplomate of the American Chiropractic Board of Sports Physicians in 1993 and served on the Governor's Council on Physical Fitness and Sports in Florida.

Due to an unfortunate injury to his left hand and wrist in 1996, Dr. Hyde has been unable to continue to practice as a chiropractor. His entire career has revolved around treating athletes and being involved in promoting chiropractic treatment to athletes around the world. Dr. Hyde currently serves as advisor to the World Olympians Association of the Americas and as general secretary to the Federation Internationale de Chiropratique du Sport (FICS).

#### LECTURE OUTLINE

- I. Case Histories
  - A. Lumbar compartment syndrome
  - B. Fibromyalgia
  - C. Plantar fasciitis
- II. History of the Graston Technique
  - A. Developed by athletes
  - B. Ball Memorial Hospital and Ball State University
  - C. Development of the six tools
    1. Description of the tools
    2. Treatment strokes
    3. Stroke description
- III. Benefits of the Technique
  - A. To the patient
  - B. To the clinician
    - C. To referral sources
    - D. To trainers/teams
- IV. Contraindications
  - A. Red flags
  - B. Yellow flags
- VI. Indications
  - A. Conditions known to respond
  - B. Other possible applications
- VII. Basic Components of the Graston Technique
  - A. Component/rationale
  - B. Integrating the Graston technique
- VIII. Research
  - A. Literature review
- IX. Conclusion

#### Graston Technique Treatment Strokes

**Sweep** — This stroke can be used by all instruments with the instrument moving in one direction at the same rate in either a linear or curvilinear path. This stroke is used for scanning an area to be treated to locate lesions and to reduce edema.

**Fanning** — Best with GT1, GT2, GT4 and GT5. This stroke fixes one end of the instrument while the clinician moves the remaining portion of the instrument in an arc. This stroke is used for localized scanning, that is, locating an area to be treated.

**Brushing** — Done with GT3 (tongue depressor). This involves superficial, linear stroking motions with small amplitude, multiple direction treatment. Brushing occurs in only one direction at a time and not back and forth. It is used for mobilization of superficial fascia and desensitization seen in post-surgical scars but NOT scars secondary to burns.

**Strumming** — This can be accomplished with GT1, GT3 and GT4. Strumming consists of deep, linear stroking motions, small amplitude, and perpendicular to the fiber direction. It is done in one direction at a time and not back and forth. The purpose for this stroke is for mobilization of specific restrictions.

**J-Stroke** — GT3. This may be superficial or deep and when performed, forms the letter "J." This is helpful around the spinous processes in the spine. It is used to mobilize superficial or deep restrictions.

**Swivel** — GT1, GT2. This is a rocking motion back and forth for relaxation of soft tissues.

**Scooping** — GT2, GT6. Scooping resembles performing an action much like scooping ice cream. Simply take the instrument and make a scooping motion. This can be performed in multiple directions and allows another method to break up soft tissue lesions.

## Red Flags — Contraindications to the Graston Technique

- Open wound — unhealed suture site/sutures
- Unhealed fractures
- Thrombophlebitis
- Uncontrolled hypertension
- Kidney dysfunction
- Patient intolerance/Non-compliance/Hypersensitivity
- Hematoma
- Osteomyelitis
- Myositis ossificans

## Yellow Flags — Relative Contraindications to the Graston Technique

- Anti-coagulant medications
- Cancer
- Varicose veins
- Burn scars
- Acute inflammatory conditions (e.g., synovitis)
- Inflammatory conditions secondary to infection
- Rheumatoid arthritis (especially in the acute phase)
- Pregnancy (consider inherent ligament laxity)
- Osteoporosis

## Indications for Using the Graston Technique

- Medial epicondylitis
- Lateral epicondylitis
- Carpal tunnel syndrome
- Neck and back pain (cervical, thoracic, lumbar, SI, etc.)
- Plantar fasciitis
- Rotator cuff tendinosis
- Patellar tendinosis
- Tibialis posterior tendinosis
- Heel pain
- DeQuervain's syndrome
- Post-surgical and traumatic scars
- Myofascial pain and restrictions
- Chronic and acute sprains/strains
- Non-acute bursitis
- RSD (reflex sympathetic dystrophy)
- Iliotibial band syndrome
- Wrist tendinosis
- Reduced ROM due to scar tissue formation
- Achilles tendinosis
- Entrapment syndromes
- Compartment syndromes
- Turf toe
- Metatarsalgia
- Pes anserine tendinosis/bursitis
- Plicae syndrome

- TMJ
- Various tendinoses/tendinopathies
- Trigger finger
- Virtually most soft tissue injuries, both acute and chronic

## Basic Components and Rationale of the Graston Technique

Component	Rationale
Cardiovascular warm-up	Increase blood flow and tissue heating
Graston Instrument Soft-Tissue Manipulation (GISTM)	Break up soft tissue restriction
High repetition, low weight exercise	Fatigue shortened structures and change fascial compartment dimensions
1-3, 30 second stretches	Lengthen shortened structures
Low repetition, high weight exercise	Strengthen weak or lengthened structures
Cryotherapy	Minimize post-treatment inflammation, soreness and bruising

## REFERENCES

1. Carey MT. The Graston Technique Instruction Manual.
2. Cassel C. Tensile Force in Total Striated Muscle, Isolated Fibre and Sarcolemma. *Acta Physiol Scand* 1950;21:380-401 in Hammer W, Graston Technique Module II.
3. Cook JL, Khan KM, Maffulli N, Purdam C. Overuse Tendinosis, Not Tendinitis — Part 2: Applying the New Approach to Patellar Tendinopathy. *The Physician and Sports Medicine Jun 2000;28(6)*.
4. Cook JL, Khan KM, Purdam CR. Conservative Treatment of Patellar Tendinopathy. *Physical Therapy in Sport May 2001;2(2):54-65*.
5. Davidson C, Ganion LR, Gehlsen GM, Verhoestra B, Roepke JE, Sevier TL. Rat Tendon Morphologic and Functional Changes Resulting from Soft Tissue Mobilization. *Med Sci Sports Exerc* 1997;29(3):313-19.
6. Editorials. Time to Abandon the "Tendinitis" Myth. *BJM* 2002;324:626-627.
7. Fukada E, Yasuda I. Piezoelectric effects in collagen. *J Appl Physiol* 3,1964:117 in Hammer W, Graston Technique Module II.
8. Gehlsen GM, Ganion LR, Helfst R. Fibroblast Responses to Variation in Soft Tissue Mobilization Pressure. *Med Sci Sports Exerc* Apr 1999;31(4):531-5.
9. Hammer H. Rotator Cuff Tendinosis. *DC Tracts* 2002;14(1):3-6.
10. Hammer W. Graston Technique Module II, January 18-19, 2003, Orlando, Florida. 1213.
11. Khan KM, Cook JL, Taunton JE, Bonar F. Overuse Tendinosis, Not Tendinitis — Part 1: A New Paradigm for a Difficult Clinical Problem. *The Physician and Sports Medicine* May 2000;28(5).
12. Levier T, Wilson JK. Treating Lateral Epicondylitis. *Sports Med* Nov 1999;28(5):375-380.
13. Melham TJ, Sevier TL, Malnofski MJ, Wilson JK, Helfst RH Jr. Chronic Ankle Pain and Fibrosis Successfully Treated with a

## TherapyCare Resources Outcome Summary

Injury	Avg # Rx's	Overall Outcomes (%)				Success Rate	
		Cmplt	Exc	Good	Fair	Unchanged	Complete -Good
Achilles	8	4	73	15	0	8	92
Tendinopathy							
Ankle Sprain	8	6	52	24	6	12	82
Plantar Fasciitis	7	2	44	24	11	19	70
Patella Femoral	11	5	42	24	24	5	71
Syn							
Cervical Pain	11	4	49	29	13	5	82
LBP	11	8	44	35	6	7	87
Fibromyalgia	10	6	31	44	6	13	81
Hip Pain	9	8	30	50	4	8	88
Hamstring Strain	8	12	58	12	12	6	82
ITB Tendinopathy	7	0	64	18	9	9	82
Lat Epicondylosis	10	15	44	31	4	6	90
Med Epicondylosis	8	13	27	20	7	33	60
Rotator Cuff	9	14	40	38	3	5	92
Tendinopathy							
Adhesive Capsulitis	15	0	18	55	18	9	73
Carpal Tunnel Syn*	8	5	60	21	9	5	86
Wrist Tendinopathy	7	13	46	33	4	4	92
Scar Pain	9	0	46	8	38	8	54

\* = Median # Rx's (vs. Avg.)

Complete = 100%

Fair = 70%

Excellent = 90%

Unchanged = less than 70%

Good = 80%

Success Rate: Percentage of resolution equates to attaining the patient/clinician goals of 1) increase in function, and 2) decrease in pain (10).

New Noninvasive Augmented Soft Tissue Mobilization Technique (ASTM): A Case Report. *Med Sci Sports Exerc* Jun 1998;30(6):801-4.

- Ramsey R, Street S. The Isometric Length-Tension Diagram of Isolated Skeletal Muscle Fibers of the Frog. *J Cell Comp Physiol* 1940;15:11-34 in Hammer W, Graston Technique Module II.
- TherapyCare Resources Outcome Summary.

## Biomechanical Prescription of Athletic Footwear

Theodore Forcum, DC, FACBSP

Dr. Theodore Forcum received a bachelor's degree from Willamette University, where he also served as the assistant athletic trainer. He achieved a doctorate from Western States Chiropractic College and was president of the

Sports Medicine Club. During that time, he became a licensed massage therapist and a certified strength and conditioning specialist. Dr. Forcum is a diplomate of the American Chiropractic Board of Sports Physicians, the only chiropractor in the Pacific Northwest with this highest level of sports designation.

The American Chiropractic Association Council on Sports and Physical Fitness voted Dr. Forcum the 1994-95 Sports Chiropractor of the Year. Dr. Forcum was also voted 1997 Native American Entrepreneur of the Year. He was awarded a 2000 ACA Sports Council Achievement Award.

Dr. Forcum has worked as an event physician for such events as the U.S. Track and Field championships, the U.S. Taekwondo Championships, the World Veteran's Games, the Nike World Masters Games, and the U.S. Soccer Festival. He has taught postgraduate programs for Cleveland Chiropractic College of Los Angeles, Western States Chiropractic College, Northwestern Health Sciences University and Logan College of Chiropractic. He lectures nationally and internationally on the topics of sports injuries