# **SPORTVIS™** in ANKLE SPRAINS

2 injections ideally within 5 days

# **STABHA**<sup>™</sup> for sprains

- 1 Proven effi cacy
- 2 Increased rate of healing
- 3 Reduced pain
- 4 Improved quality of healing
- 5 Reduced recurrences





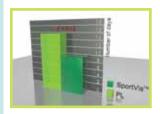
Structural support at injury site due to optimal biocompatibility

## **CLINICAL STUDY**

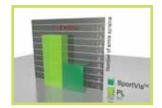
Periarticular Hyaluronic Acid in Acute Ankle Sprain.Petrella et al. Clin J Sport Med.Volume 17, Number 4, July 2007: 251-257.

Long-Term Efficacy and Safety of Periarticular. Hyaluronic Acid in Acute Ankle Sprain. Petrella et al. THE PHYSICIAN AND SPORTSMEDICINE., April 2009, No. 2, (36): 1-8.

# **158 PATIENTS followed for 2 years**



SportVis<sup>™</sup> patients recovered quicker



SportVis<sup>™</sup> patients suff er from less ankle sprains over a period of 2 years

# **REFERENCES**

- 1. Ultrasound-guided subacromial injections of sodium hyaluronate for the management of rotator cuff tendinopathy: a prospective comparative study with rehabilitation therapy. Merolla et al. Musculoskelet Surg (2013) 97 (Suppl 1): S49–S56.
- 2. Eff ects of repetitive injections of hyaluronic acid on peritendinous adhesions after fl exor tendon repair: a preliminary randomised, placebo-controlled clinical trial. Ozgenel et al. Turkish Journal of Trauma and Emergency Surgery 2012 Jan; 18(1): 11-17.
- 3. Involvement of proteoglycans in tendinopathy. Parkinson et al. J Musculoskelet Neuronal Interact, 2011 Jun; 11(2): 86-93.
- 4. Tendon: biology, biomechanics, repair, growth factors, and evolving treatment options. James et al. J Hand Surg Am. 2008 Jan; 33(1): 102-112.
- 5. Collagen structure of tendon relates to function. Franchi et al. www.thescientifi cworld.com 2007 Mar; 7: 404-420.
- 6. Tendon proteoglycans: biochemistry and function. Yoon et al. J Musculoskelet Neuronal Interact. 2005 Mar: 5(1): 22-34.
- 7. Effect of hyaluronic acid on the excursion resistance of tendon grafts. A biomechanical study in a canine model in vitro.

Nishida et al. J Bone Joint Surg (Br). 2004 Aug; 86(6): 918-924.

- $8. \ Gly cosamin ogly cans \ of human \ rotator \ cuff \ tendons: changes \ with \ age \ and \ in \ chronic \ rotator \ cuff \ tendinitis. \ Riley \ et\ al.\ Ann$
- Rheum Dis. 1994 Jun; 53(6): 367-376.
- $9. Tendon \ degeneration \ and \ chronic \ shoulder \ pain: changes \ in \ the \ collagen \ composition \ of \ the \ human \ rotator \ cuff \ tendons \ in$

rotator cuff tendinitis. Riley et al. Ann Rheum Dis. 1994 Jun; 53(6): 359-66.

- 1. Chronic tendon pathology: molecular basis and therapeutic implications. Riley G. Expert Rev Mol Med. 2005 Mar 24; 7(5): 1-25.
- 2. Collagen fi bres of the spontaneously ruptured human tendons display decreased thickness and crimp angle. Tero et al. J

Orthop Res. 2004 Nov; 22: 1303-1309.

- 3. Biomechanics of tendon injury and repair. Lin et al. J Biomech. 2004 Jun; 37: 865-877.
- 4. Tendon lesions and soft tissue rheumatism—great outback or great opportunity? Cawston et al. Ann Rheum Dis. 1996 Jan; 55(1):13.
- 5. The role of proteoglycans in maintaining collagen fi bril morphology. Dell'Orbo et al. Histol Histopathol. 1995 Jul; 10(3): 583-8.
- 6. Hyaluronic acid modulates proliferation, collagen and protein synthesis of cultured fetal fi broblasts Mast et al. Matrix. 1993

Nov; 13(6): 441-6.

7. Management of tennis elbow with sodium hyaluronate peri-articular injections Petrella et al. Sports Medicine, Arthroscopy,

Rehabilitation, Therapy and Technology. 2010,2;4:1-6.

8. Effi cacy and safety of corticosteroid injections and other injections for management of tendinopathy: a systematic review of

randomised controlled trials, Coombes et al. The Lancet. Volume 376; Issue 9754: 1751-1767.

9. Comparative Eff ectiveness of Injection Therapies in Lateral Epicondylitis. A Systematic Review and Network Meta-analysis of

Randomized Controlled Trials, Krogh et al. The American Journal of Sports Medicine.Vol. 20(10): 1-12.

- 1. The early eff ect of high molecular weight hyaluronan (hyaluronic acid) on anterior cruciate ligament healing: an experimental study in rabbits. Wiig et al. J Orthop Res. 1990 May; 8(3): 425-34.
- 2. Periarticular Hyaluronic Acid in Acute Ankle Sprain. Petrella et al. Clin J Sport Med.Vol 17 (4); July 2007: 251-257.
- 3. Long-Term Effi cacy and Safety of Periarticular Hyaluronic Acid in Acute Ankle Sprain. Petrella et al. THE PHYSICIAN AND SPORTS MEDICINE. April 2009; No. 2 (36): 1-8.
- 4. Watson, Soft Tissue Wound Healing Review, 2003.
- 5. Weiss et al., Musculoskeletal Applications of Hyaluronan and Hylan, Implantable, Clinics in Podiatric Medicine and Surgery, Vol. 12, No. 3, July 1995.
- 6. Weigel et al., The specific interaction between fi brin (ogen) and hyaluronan: possible consequences in haemostasis, infl ammation and wound healing, Ciba Found Symp. 1989; 143: 248-61; discussion 261-4, 281-5.
- 7. Le Boeuf et al. Eff ects of Hyaluronic Acid and Other Glycosaminoglycans on Fibrin Polymer Formation, Biochemistry, 26, 6052-6057, 1987.
- 8. Le Boeuf et al., Human fi brinogen specifi cally binds hyaluronic acid, Journal of Biological Chemistry, Vol. 261, No. 27, September 1986.
- 9. Weigel et al., A Model for the Role of Hyaluronic Acid and Fibrin in the Early Events during the Infl ammatory Response and Wound Healing, Journal of theoretical Biology, 119,219-234, 1986.



# **SPORTVIS™** in ROTATOR **CUFF TENDINOPATHY**

2 injections, 14 days apart

# **STABHA**<sup>™</sup> for shoulder strains

- 1 Reduced scar tissue formation 2 - Restored strength and function
- 3 Earlier return to mobility
- 4 Pain relief
- 5 Proven efficacy





- A ECM degeneration and lower quality of ECM produced (less proteoglycans)
- B Decreased collager production
- C Excess fi brosis

**ECM**: Extra Cellular Matrix





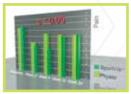
- A ECM regeneration functional proteogly cans restored)
- B Increased collagen production
- C Restored tendon structure (less scartissue)

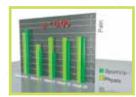
## **CLINICAL STUDY**

Ultrasound-guided subacromial injections of sodium hyaluronate for the management of rotator cuff tendinopathy: a prospective comparative study with rehabilitation therapy.

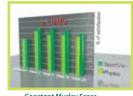
Merolla et al. Musculoskelet Surg (2013) 97 (Suppl 1): S49-S56.

50 PATIENTS RECRUITED > 25 in SportVisTM Group > 25 in Physio Group

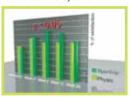




Pain with activity



Constant Murley Score



Oxford Shoulder Score

# **SPORTVIS™** in LATERAL **EPICONDYLALGIA**

2 injections, 7 days apart

# **STABHA**<sup>™</sup> for elbow strains

- 1 Proven effi cacy
- 2 Accelerated healing
- 3 Increased tensile strength
- 4 Reduced pain
- 5 Ouicker return of strength



- Misalianment of fi bres
- Loss of movement





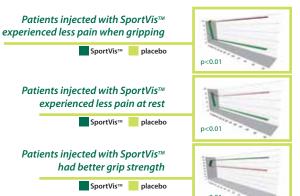


Realignment of fi bres

## **CLINICAL STUDY**

Management of tennis elbow with sodium hyaluronate periarticular injections. Petrella et al. Sports Medicine, Arthroscopy, Rehabilitation, Therapy and Technology. 2010,2;4:1-6

> 11 PATIENTS > 165 patients treated with SportVisTM > 166 patients treated with placebo





# To relieve pain and promote function in damaged tendons and ligaments.



Soft Tissue Adapted Biocompatible Hyaluronic Acid

**SportVis™** is a clear solution of sterile 1% sodium hyaluronate in a phosphate buffered saline contained in a pre-filled syringe for peri-articular injection into the soft tissue surrounding tendons and ligaments. Sodium hyaluronate is a long chain polysaccharide made up of repeating disaccharide units, which occurs naturally in the body. **SportVis™** has a pH and osmolality biocompatible with the soft tissue. 1.2ml of SportVis™, sterilised by filtration, is enclosed within a glass, ready to use, disposable syringe. The syringe is packed within a blister pack and an outer cardboard carton

SportVis™ is intended to relieve pain and optimise recovery of tendons and ligaments damaged by acute or chronic injury. SportVis™ sodium hyaluronate augments the sodium hyaluronate naturally present in the soft tissue surrounding damaged tendons and ligaments and provides support, lubrication and hydration to the affected site thereby providing the ideal environment for healing of the damaged tissue. SportVis™ has been demonstrated to relieve pain and optimise recovery in the ankle following first or second degree sprain, to relieve chronic pain and disability of the elbow with lateral enicondylalgia and to relieve pain in patients with symptomatic rotator cuff

### Contra-indications

Patients with known sensitivity to sodium hyaluronate.

### **Dosage and Administration**

Peri-articular injection of SportVis™ should only be made by a Healthcare Professional trained in the specific peri-articular injection technique. The contents of the syringe are sterile and should be injected using a sterile needle of an appropriate size for the injection site. The area to be treated should be disinfected before injection. Discard the syringe and needle after single use.

## **Ankle Sprains**

One 1.2ml peri-articular injection of SportVis™ preferably within 48 hours of the first or second degree ankle sprain and a second injection 2 to 3 days following the first injection, 27 gauge needle is reco

Peri-articular injections should be delivered during a single penetration along the anterior talofibular ligament using clinical landmarks. The injection is delivered along 3 planes from anteroposterior, medial and lateral to the proximal ligamentous landmark.

## Lateral Epicondylalgia

One 1.2ml peri-articular injection of SportVis™ at the lateral elbow epicondyle site followed by a second injection at the same site one week after the first injection, 27 gauge needle is recommended Identify the tenderest point of the epicondyle by gentle palpation. Position the needle at 45 degrees to the point of maximal pain of the lateral epicondyle. After puncture of the skin, angle the needle parallel to the skin and insert it towards the point of maximal pain on the lateral epicondyle. Inject half the contents as the needle is withdrawn to the skin without

exiting the skin. Rotate the needle 180 degrees (opposit direction) and insert the needle parallel to the skin toward the point of maximal pain on the lateral epicondyle Inject the remaining contents on withdrawing needle. Remove the needle from the skin. Flex and extend the elbow five times and then internally and externally rotate five times

### Rotator Cuff Tendinopathy

One 1.2ml peri-articular injection of SportVis™ inte the subacromial space of the shoulder just above the tendon followed by a second peri-articular injection after 14 days, 22 gauge needle is recommended. Se the patient in an upright position, arm relaxed at the side and externally rotated. Use of an ultrasour probe positioned on the lateral shoulder directed i the plane of the supraspinatus tendon to quide the eater tubercle, head of the humerus and subacromial cleft. Introduce the needle into the clef 1cm posterior and 2cm distal to the antereo-latera acromial edge. Advance the needle horizontally and in a partly medial direction under the acrom cess. When no resistance to the plunger is fel inject SportVis™ over the head of the humerus into the subacromial space taking great care not inject

### **Warnings and Precautions**

SportVis™ should only be injected by a healthcar ofessional trained in the procedure. SportVis™ re-filled syringes are single use. The contents of the syringe should be used for one injection only. An remaining sodium hyaluronate should be discarded f a syringe is retained for a subsequent injection there is a risk of contamination resulting in the possible infection of the patient and/or foreign body reaction. SportVis™ should not be re-sterilised as th device performance may be compromised which could cause serious harm to the patient's health and safety. SportVis™ must not be injected into blood vessels because sodium hyaluronate has the potential to occlude the vessels, which could result n embolism or infarction. SportVis™ should not be njected into a haematoma. Direct injection in tendons should be avoided as this can lead a rupture. Use of an ultrasound probe to quide the injection will minimise this risk. Do not inject into the soft tissue of patients if the area of the injection si is infected or where there is evidence of acute chronic skin disease Sodium hyaluronate manufactured by fermentation of Streptococcus equ and rigorously purified. However, the healthcare professional should consider the immunological and other notential risks that can be associated with the injection of any biological material. There is a risk of infection at the injection site as with an peri-articular procedure. There is no evidence of the safety of SportVis™ in human pregnancy and lactation. The safety and effectiveness of SportVis has not been tested for children below 18. Follow national or local guidelines for the safe use an disposal of needles. Obtain prompt medical attention f injury occurs. Do not use if packaging has bee damaged. Do not use after the expiry date.

### Adverse Reactions

Mild erythema that should resolve with time

### Incompatibilities

SportVis™ has not been tested for compatibility with ther substances for peri-articular injection Therefore the mixing or simultaneous administration with other peri-articular injectables is not

Store between 2°C and 25°C. Do not freeze, Protect from light. Do not use if sterile packaging has bee damaged. Do not use after expiry date.







