AMERICAN SOCIETY FOR PERIPHERAL NERVE
Newsletter
ASPN
Fall 2007

President's Message

Dear Colleagues,

It continues to be an exciting year. ASPN has positioned itself as the society to discuss, treat and develop complex nerve reconstruction. We have had a banner year. In January, the ASPN meeting had the largest attendance to date. Further we have developed under the guidance of Dr. Rajiv Midha a grant from Integra. Deadline for submission of proposals for this grant is November 1, 2007. Our Ad-Hoc Grants Committee will be evaluating these proposals for funding. In addition, we have utilized the ASPS 503 C category status to allow us to continue to accept monetary support for these initiatives. In the future, we will need to continue to evaluate additional revenue sources.

Dr. Jonathan Winograd has put together an outstanding scientific program for the meeting in LA. I am planning to have increased attendance over last year for this meeting. Abstract presentations are being finalized and the venue should be spectacular.

Dr. Melanie Urbanchek and the Bylaws Committee have reviewed and revised the bylaws. Keep a close eye out for these as they will be circulated before the meeting where a vote will be taken.

Under the guidance of Dr. Paul Cederna, the Website Committee has selected another vendor for our Web page. It is our expectation that this will allow further expansion and utilization of this communication tool.

Dr. Gedge Rosson continues to be diligent on helping our members look at reimbursement for procedures. If you think that certain CPT codes do not adequately represent the procedure, I would encourage you to contact Dr. Rosson or the ASPN Coding & Reimbursement Committee so that we can work with the RUC committee for presentation.

Finally Dr. Robert Russell and I are pleading with those members that have not paid their dues. This is critical for the survival of our organization since most of our income is made through the process. Please continue to support our organization and allow us to provide for you benefits of membership.

We will see all of you in Los Angeles in January.

Gregory Evans, MD
President

From The Editor's Desk

This issue of the ASPN newsletter has information about the next meeting of the ASPN in Beverly Hills, CA in January 2008. The program promises to be very exciting. Also in this issue is an article by Dr. Michael Neumeister about his experience with the use of Botox for pain management. This is a natural introduction to the topic of "Pain" which will be the theme of the 2009 annual meeting in Hawaii under the leadership of our President Elect Robert Russell. So, if you have new ideas in pain management, get your article ready for the 2009 meeting.

The success of this newsletter, as a tool of communication between its members, depends on the participation of the membership. Members are encouraged to share their ideas, thoughts, and experiences with the rest of us. Equally important, is the feedback from the members regarding what they would like to see and change in their newsletter. So, please send your feedbacks, suggestions, criticism and new ideas so we all can share in the collective wisdom of our members.

Again, my sincere thanks are extended to my co-editors; Chris Novak, PT, MS and Rob Spinner, MD.

On behalf of the ASPN, I am very grateful to Mrs. Alice Romano's excellent help to our organization through the years. Congratulations to Alice for her promotion to be the executive director for AAHS. Best of luck!!!!

Nash Naam, MD
drnaam@handdocs.co

REGISTRATION FOR THE ASPN 2008 ANNUAL MEETING IS NOW AVAILABLE ONLINE AT WWW.PERIPHERALNERVE.ORG

Join us January 11-13, 2008 at the Hyatt Regency Century Plaza Hotel & Spa in Beverly Hills, CA for the ASPN 2008 Annual Meeting. ASPN has extended their programming to begin on at 12:00pm on Friday, January 11 and conclude at 3:30pm on Sunday, January 13.

Rooms are available at the Hyatt Regency Century Plaza for a special group rate of $270 plus tax through December 1, 2007, or until our room block is sold out, whichever occurs first. We encourage you to make reservations as soon as possible to ensure room availability. The Hyatt is conveniently located within walking distance of many restaurants and shopping, and offers a multitude of exceptional amenities.

A variety of commercial exhibits will be featured at the Annual Meeting, enabling attendees to learn about the technological advances pertaining to upper extremity surgery, neurosurgery and reconstructive microsurgery; and to meet key suppliers. Be sure to stop by the California Showroom to visit the 2008 Exhibits listed below.

Advanced Rehab
Aptis
American Society of Plastic Surgeons
Ascension Orthopaedics
ASSI
Axogen
Bio Met Trauma
BioPro, Incorporated
BME
Cook Medical
DePuy Hand Innovations
Elsevier/Saunders/Mosby
Guatemala Healing Hands Foundation
Hand Rehab Foundation
Hologic, Incorporated
Integra
Lippincott, Williams & Wilkins
Medartis, Incorporated
Medical Communications Media
Medlink USA
Medtronic
Micrins Surgical, Incorporated
Microsurgery Instruments
MMI
North Coast Medical
Novadaq
Nutek
Orfit
Robbins Instruments
Small Bone Innovations
Smith & Nephew
Springer
Stryker
Synovis Micro Companies
Synthes
Thieme
Tornier
Trimed
True Vision
UPEX
ViOptix

We look forward to seeing you in Beverly Hills!

ASPN 2008 Meeting Program

Friday, January 11, 2008

9:00am – 11:00am **ASPN Executive Council Meeting**

12:00pm – 12:10pm **Presidents/Program Chair Welcome**
Gregory R.D. Evans, MD, ASPN President
Jonathan Winograd, MD, ASPN Program Chair

12:10pm – 1:30pm **Scientific Paper Session A**

1:30pm – 3:00pm **ASPN Invited Speaker: Prof. Andrew Schwartz, PhD**

Useful Signals from Motor Cortex

Recent scientific progress has led to a better understanding of the representation of arm movement in the motor cortex. This knowledge has been used to build neural prosthetic devices capable of operating a prosthetic arm and gripper in a self-feeding task.

Dr. Schwartz received his Ph.D. from the University of Minnesota in 1984 with a thesis entitled "Activity in the Deep Cerebellar Nuclei During Normal and Perturbed Locomotion." He then went on to a postdoctoral fellowship at the Johns Hopkins School of Medicine where he worked with Dr. Apostolos Georgopoulos, who was developing the concept of directional tuning and population-based movement representation in the motor cortex While there, Dr. Schwartz was instrumental in developing the basis for three-dimensional trajectory representation in the motor cortex.

In 1988, Dr. Schwartz began his independent research career at the Barrow Neurological Institute in Phoenix. There, he developed a paradigm to explore the continuous cortical signals generated throughout volitional arm movements. This was done using monkeys trained to draw shapes while recording single-cell activity from their motor cortices. After developing the ability to capture a high fidelity representation of movement intention from the motor cortex, Dr. Schwartz teamed up with engineering colleagues at Arizona State University to develop cortical neural prosthetics. The work has progressed to the point that monkeys can now use these recorded signals to control motorized arm prostheses to reach out grasp a piece of food and return it to the mouth.

	Dr. Schwartz moved from the Barrow Neurological Institute to the Neurosciences Institute in San Diego in 1995 and then to the University of Pittsburgh in 2002. In addition to the prosthetics work, he has continued to utilize the neural trajectory representation to better understand the transformation from intended to actual movement using motor illusions in a virtual reality environment.
3:00pm – 3:30pm	**Break with Exhibitors**
3:30pm – 5:00pm	**Scientific Paper Session B**

Saturday, January 12, 2008	**AAHS-ASPN-ASRM Combined Programming**
6:30am – 7:00am	**Coffee**
7:00am – 7:15am	**Presidents' Welcome** **N. Bradly Meland, MD, AAHS President** **Gregory R.D. Evans, MD, ASPN President** **Lawrence B. Colen, MD, ASRM President**
7:15am – 8:15am	**Panel: Treatment of Scleroderma with Sympathectomy** This panel will cover treatment of ischemic feet, Hypothenar Hammer Syndrome and Treatment with Botox. William C. Pederson, MD; Moderator Chris Attinger, MD Craig Johnson, MD Michael Neumeister, MD
8:15am – 8:45am	**Breakfast with Exhibitors**
8:45am – 9:45am	**Panel: Tendon and Nerve Transfers for Common Upper Extremity Palsies: Consensus and Controversies** Nerve transfers and tendon transfers for radial nerve palsy will be discussed. Jonathan Winograd, MD; moderator Allen T. Bishop, MD Guenter Germann, MD Thomas Tung, MD
9:45am – 10:45am	**AAHS/ASPN/ASRM Presidents Invited Lecture: Aaron Vinik, MD**

Neurovascular Dysfunction in Diabetes

Dr. Vinik will present the information on the role of the microvasculature in providing nutritive support for the nervous system, to illustrate the functional as well as the organic causes of microvascular insufficiency, to show the mechanistic aspects thereof and highlight potential for medical intervention to improve function.

Dr. Aaron I. Vinik is one of the leading diabetes researchers in the world and leads the quest for a cure to diabetes at the Strelitz Diabetes Institute at Eastern Virginia Medical School. Dr. Vinik went to EVMS from the University of Michigan where he was a professor of both Internal Medicine and Surgery. He is a leader in research on the diagnosis and treatment of diabetic neuropathy and has particular expertise in the area of autonomic diabetic neuropathy. Dr. Vinik has been a leader in research on new approaches to generate islet cell tissue from pancreatic duct tissue.

10:45am – 11:30am **AAHS/ASPN/ASRM Outstanding Paper Presentations**

Saturday, January 12, 2008 **ASPN Program**

11:30am – 12:30pm **Lunch with Exhibitors**

12:30pm – 1:30pm **ASPN Invited Speaker: Prof. Jeff Lichtman, MD, PhD**

Peripheral Nerve Growth Branching and Retraction: Studies in Fluorescent Mice

Mice in which axons express a variety of different colored fluorescent proteins allow *in vivo* studies of peripheral nerve development and reorganization in trauma and aging.

Jeff Lichtman, MD, PhD is Professor of Molecular and Cellular Biology at Harvard University. He received his MD and PhD in Neurobiology at Washington University in St. Louis. Dr. Lichtman currently serves as Advisory Editor for Anatomy and Embryology and is on the Editorial Board for the Journal of

Neuroscience, Journal of Neurobiology, Molecular and Cellular Neuroscience and Cells and Systems.

1:30pm – 3:00pm **Scientific Paper Session C**

6:30pm – 8:00pm **ASPN/ASRM Reception**
The ASPN & ASRM would like to thank ASSI for their generous sponsorship of this reception.

Sunday, January 13, 2008

6:30am – 7:30am **Breakfast with Exhibitors**

7:00am – 8:00am **Instructional Courses**

301 Intraoperative Monitoring
Intraoperative neurophysiological techniques help guide decision making during nerve surgery so that outcome may be optimized. Background to these techniques, and their usefulness, will be explored by classical and case studies. Practical applications will also be emphasized.
David Houlden, PhD
Robert Tiel, MD
Allen Van Beek, MD

302 Obstetrical Brachial Plexus Palsy
Current thinking concerning timing of surgery versus natural history will be explored. Techniques of nerve transfers will be described.
Allan Belzberg, MD
Howard M. Clarke, MD, PhD
Scott Kozin, MD

303 Peripheral Nerve Tumors
Diagnosis and treatment of benign and malignant peripheral nerve tumors.
Ab Guha, MD
Rajiv Midha, MD
Robert Spinner, MD

204 Reinnervating Muscle
The course will focus on the consequence of muscle denervation, physiologic responses during reinnervation, and the potential techniques to optimize the recovery of function.
Paul Cederna, MD
Tessa Gordon, PhD
William Kuzon, Jr, MD

305 Working Toward a Brain-Body Interface: Intelligent Functional Electrical Stimulation For The Upper Extremity

The course will focus on the development of a brain-body interface, including implementation of existing technologies to link functional electrical stimulation of the upper extremity to cortical movement intention.
Robert Ajemian, PhD
Jonathan Winograd, MD

8:15am – 9:15am **ASRM/ASPN Panel: Treatment of the Mangled Hand: A Multidisciplinary Approach**

This panel will focus on the surgical approach to the complex wounds of the upper extremity. Aspects of discussion will include acute management of soft tissue, nerve loss, bony instability and revascularization. The multidisciplinary approach should captivate peripheral nerve surgeons, microsurgeons and hand surgeons.
Michael W. Neumeister, MD; Moderator
David Chwei-chin Chuang, MD
L. Scott Levin, MD
Michael Sauerbier, MD, PhD

9:15am – 9:45am **Break with Exhibitors**

9:45am – 11:30am **Scientific Paper Session D**

11:30am – 12:00pm **Poster Presentations**

12:00pm – 1:00pm **Lunch with Exhibitors**

1:00pm – 2:15pm **Scientific Paper Session E**

2:15pm – 3:15pm **ASPN Invited Speaker: Professor Neville Hogan**

Robotics for Neurorecovery

Robots are well on their way to becoming commonplace domestic appliances but to realize their full potential requires the perfection of *contact robotics*, machines that physically cooperate with humans. Robots capable of safe physical cooperation with humans enable entirely new ways for technology to help people. One pioneering application of contact robotics is the delivery of physiotherapy to facilitate recovery after neurological injury. I will review recent success with interactive robotic treatment of upper-extremity motor disorders. It has proven to afford lasting benefits, both an increase of motor ability and a reduction of paretic arm pain, for persons in both the acute phase and the chronic phase of recovery after stroke.
Neville Hogan is Professor of Mechanical Engineering and Professor of Brain and Cognitive Sciences at the Massachusetts

Institute of Technology. He is Director of the Newman Laboratory for Biomechanics and Human rehabilitation and a founder and director of Interactive Motion Technologies, Inc., a company offering innovative robotic tools to study and treat neuro-motor impairments. Born in Dublin, Ireland, he obtained a Dip. Eng. (with distinction) from Dublin Institute of Technology and M.S., M.E. and Ph.D. degrees from the Massachusetts Institute of Technology. Following industrial experience in engineering design, he joined MIT's school of Engineering faculty in 1979 and has served as Head and Associate Head of the MIT Mechanical Engineering Department's System Dynamics and Control Division. He has been awarded Honorary Doctorates from the Delft University of Technology and the Dublin Institute of Technology and the Silver Medal of the Royal Academy of Medicine in Ireland.

3:15pm – 3:30pm **Closing Remarks & Presentation of Awards**

3:30pm – 4:00pm **ASPN Business Meeting**

4:00pm – 4:30pm **ASPN Executive Council Meeting**

ASPN Future Meetings

2008 Annual Meeting

January 11 – 13, 2008
The Hyatt Regency Century Plaza Hotel and Spa
Beverly Hills, California

2009 Annual Meeting

January 9 – 11, 2009
Grand Wailea Resort Hotel and Club
Maui, Hawaii

2010 Annual Meeting

January 9 – 10, 2010
Boca Raton Resort and Spa
Boca Raton, Florida

Congratulations

At the meeting of the World Society for Reconstructive Microsurgery, in Athens, Greece, in June, 2007, the award for the Best Clinical Research Paper was given to **Gedge D. Rosson, MD** and **A. Lee Dellon, MD** for their paper on Prevention of Ulceration and Amputation in Patients with Diabetic Neuropathy by Decompression of Lower Extremity Nerves.

ASPN is now accepting applications for research grants.

DEADLINE FOR SUBMISSION IS NOVEMBER 1.

Seed Grants are now being offered by ASPN for young investigators. The grants are meant to support either basic or clinical research related to peripheral nerve disorders. The purpose is to provide start up funding ($2500/grant) for early - phase projects which are not yet competitive for national funding such as NIH or CIHR. The submissions will undergo peer-review by a research/grant committee, chosen by the ASPN council. Depending on the amount of money available, one or several grants will be offered per year.

Eligibility Criteria:

1. Applicant must be a member of ASPN.
2. The proposed research must pertain to peripheral nerve disorders, but can be either basic or clinical.
3. The applicant should be within the first 5 years of their initial or academic appointment to an institution. Residents or fellows who are starting their appointment in the granting year are also eligible, in which case the application must be accompanied by a letter from the division/department head verifying appointment.
4. Applicants who hold major grant funding from national organizations (such as NIH and CIHR) are excluded from applying.

How To Apply?:

1. The annual deadline for applications to be received is November 1. Grant recipients will be announced at the annual ASPN meeting in January.
2. Applications are to be submitted electronically to the ASPN central office, (C/O Alice Romano) via email address: aliceromano@isms.org. Applications received after November 1 will not be accepted.
3. The application should be 2 pages in length, single spaced, size 12 font, with 1 inch margins. It must include the title, research question and hypothesis, a brief background and a more detailed section describing the study design and methods. A third page can be appended showing pertinent figures and tables. A reference list or bibliography of up to 2 pages should also be included.
4. With the application, a one page budget should be provided. If the budget exceeds $2500, there should be indication as to how the remainder of the money will be secured by the investigator. The budget can not be used to support the salary of the principle investigator. Given the size of the grant, no overhead or institutional support may be included. All budget items must be direct costs.
5. A brief (up to 2 page) CV should be included with the application.
6. A 1 page letter of recommendation from the division or department head of the individual is required and should also explicitly state that IF there are any indirect costs to administer the grant, that these will be borne by the department.

What's New in Peripheral Nerve Surgery and Research

Botox and Pain

Michael W. Neumeister
Southern Illinois University

It is often disappointing and discouraging for the hand surgeon to be confronted with patients with chronic ischemia in the digits. The ischemia resulting pain, ulcerations, and disuse often rendering the patient debilitated and chronically depressed. Satisfaction can be gained on the part of the surgeon and the patient when an identifiable isolated occlusion of a vessel is identified as resulted in the ischemic changes. In such cases, a palmar or digital bypass surgery and often reestablish appropriate blood flow to the digits to resolve the discomfort deal of the ulcers and relieve the painful disability. There are many times, however, that general ectasia of the vessels is identified in the vessels that would preclude any type of bypass surgery. With this scenario of digital ischemia, pharmacologic manipulation or thoracic sympathectomies have been offered to diminish some of the symptoms for the patients. Adrian Flatt introduced digital sympathectomies for such cases where proximal sympathectomy or pharmacologic manipulation had limited benefit. The results of digital sympathectomies, however, have met with mixed results, and often associated with surgical morbidity.

Recently I have been using Botox for the treatment of patients with ischemic ulceration and pain as a result of Raynaud's disease or phenomenon. Botox therapy was introduced by Allan Van Beek, while treating patients with hyperhidrosis of the hand. These patients also had symptoms of Raynaud's disease. A notable increase in perfusion to the hands and fingers were noted for the Botox injections. Since that first presentation, I've injected 14 patients with Raynaud's disease. Each of the patients noticed an immediate increase in perfusion of the fingers and a significant reduction in pain. A laser Doppler evaluated and verified the increase in digital blood flow. At times and increased 300% was noted in the blood flow to fingers within 15 minutes following the Botox injections. Another fascinating aspect of the Botox injection is that dramatic reduction in pain noted almost immediately. One would not expect such a decrease in pain that only restore the blood flow because many of the patients had ulcerations as well. The question arises as to whether the effective Botox is by an action directly on the blood, their innervation, the nerve pathways of chronic pain, or combination of the above. The mechanism of action of Botox for the subpopulation of patients with Raynaud's and indeed those with chronic pain, is felt to be different than the action Botox has to produce muscle paralysis.

The initial uptake of Botox into the nerve terminal has a delay of one to four days. It is for this reason, that paralysis is not clinically evident for the duration of time. To produce muscle paralysis, Botox is taken up the synaptic terminal at the neuromuscular junction. Botox blocks the release of acetylcholine. As Botox is taken up by the terminal synapse, it eventually blinds to proteins on the acetylcholine vesicle. This protein is a part of a group of proteins called synpatosomal associated protein – 25, also known as SNAP-25. By inhibiting SNAP-25 vesicle with acetylcholine no longer mobilizes to the nerve terminal membrane and can, therefore not be to induce muscle contraction. The muscle is therefore rendered paralyzed. The effect of Botox lasts two to four months within the nerve terminal.

Injection of Botox for the treatment of patients with chronic ischemia and pain has almost immediate effects. This must mean, then, that Botox is working by a different mechanism in Raynaud's disease, than it is in procedures seeking muscle paralysis . It has been postulated that Botox may affect several neurotransmitters including norepinephrine, substance P, glutamate, and calcitonin gene related protein (CGRP) Botox may also have a direct effect on specific sodium channels. The mechanism of action that Botox has on pain reduction seems to be related to the neuropeptides and pathways that involve chronic neuropathic pain. Botox may effect given neurotransmitter is involved in a series of events that propagate chronic pain. For instance, Botox may block the neurotransmitter substance P, which communicates with the spinal cord, as well as the cerebral cortex. Ultimately, the pathway is blocked to cease the perception of pain. It should be noted that Botox does not work by the same mechanism that local anesthetics have their effect since sensibility is completely preserved following the injection of Botox into the fingers. We are currently working on identified the true mechanism of action of Botox through a series of experiments that involve tissue bath studies on blood vessels, dorsal root horn nerves, and peripheral sodium channels as well as their specific pain receptors .

I've been very impressed with Botox injections into the hand of those patients with chronic ischemic and neuropathic pain. This work has extrapolated to those patients that have chronic pain syndromes. Work will continue a prospective studies and laboratory experiments to fully delineate a therapeutic value of Botox in patients with ischemic and chronic pain syndromes.

Recruit a Member

Do you know anybody who wants to join a growing society and contribute to the clinical and research development in the area of peripheral nerve surgery? Recruit and sponsor an associate to become a member of the American Society for Peripheral Nerve. Applications are available online at www.peripheralnerve.org

Ideas & Innovations

Robert Russell, MD

The editor of our newsletter, Dr. Nash Naam, phoned to ask my thoughts on contributing material to the newsletter. Together we concocted an " Ideas & Innovations" or "How I do it" corner in which one member could describe a clinical or research technique or idea each month. In the next issue an invited discussant will pan or praise the previous idea. So here goes my personal thoughts on the most common operation in hand surgery, carpal tunnel release.

My practice includes a lot of workers compensation patients and therefore many carpal tunnel cases. Over the years this also includes a number of patients with recurrent symptoms following release by "other" surgeons. In many of these recurrent cases, I find dense scar, an incomplete release of the transverse carpal ligament, a reconstituted ligament or a median nerve which has migrated out of the carpal tunnel and is now lying directly under the skin. I believe that excess scar may be induced by residual bleeding into the carpal tunnel after surgery and that a superficial nerve position is potentiated by lack of wrist splinting after surgery.

My preferred operation for recurrent cases is to sharply dissect out the nerve from above the wrist crease through the carpal tunnel, excising all scar. If the nerve has migrated to a superficial position then it is repositioned to a deep radial position within the carpal tunnel and held there with a synovial flap from adjacent flexor tendons sutured to the radial sidewall of the tunnel. If the nerve appears ischemic or I'm attempting a release for the third time, I wrap or cover the nerve with a fasciocutanous flap elevated from the distal radial forearm on perforating vessels from the radial artery. This flap is easy to raise, has no visible donor site, helps revascularize the nerve, keeps it in a deep position and provides well vascularized soft tissue "padding" over the nerve in the carpal tunnel. In many cases I believe recurrent nerve irritation, which translates into symptoms, is caused by increased scar tissue around the nerve, which in itself may be constrictive and/or result in decreased vascularity. Excessive scar may also interfere with nerve glide during wrist and digital motion. Traction on a nerve bound in scar during wrist flexion or

extension may be the source of recurrent symptoms.

To prevent my own patients form developing the secondary problems I've seen from "Saint Elsewhere" I have modified my own technique for primary carpal tunnel release.

First, I no longer perform endoscopic CTR, preferring to see the nerve through out its course within the carpal tunnel. I have never injured a nerve during an open release but I can't say the same for endoscopic release. I completely divide the transverse carpal ligament from above the wrist crease to the palmar arch. I then excise a 2mm wide strip of ligament from the cut edge to prevent reconstitution of the ligament after skin closure. I then inspect the median nerve and incise or partially excise the epineurium if there is an area of constriction. Last I open the sidewall of the canal of Guyon, which lies in a plane just above the transverse carpal ligament. (This is not coded separately.) The ulnar and median nerves are now completely released and there is virtually no chance the ligament can "reform" after wound closure because the edges don't touch. Finally I place a #19 gauge butterfly drain in the carpal tunnel, which is held in place with a single steri-strip across the wrist. The incision is closed and the wrist splinted in extension to keep the nerve within the carpal tunnel. The needle of the butterfly drain is placed in a 10cc vacutainer tube which is changed every eight hours or when half full. The drain can be removed without removing the splint in one to two days and the splint removed by the patient five days following surgery. No blood collects in the carpal tunnel around the nerve because the tourniquet is deflated prior to closure and the drain removes any excess oozing. I have had patients who drain 10-15ccs of blood into the vacuum tubes. I believe that excessive blood within the carpal tunnel after surgery leads to increased inflammation and subsequent scar formation. A small drain prevents this problem. The patient begins active and passive digital motion immediately after surgery in the wrist splint and full wrist and digital motion at five days when the splint is removed. Hand therapy includes theraputty and other motion and strengthening exercises.

This technique completely releases both the median and ulnar nerves, prevents the transverse carpal ligament from "reforming", avoids perineural hematoma and prevents the nerve from bowstringing into a superficial position. So that's my technique and I'm sticking to it.