EXPLORING HAND THERAPY

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From the Editors' Desk:

Greetings as we begin 2004 with great offers and exciting hand therapy education courses. As always, EHT is dedicated to bringing hand therapists excellence in education.
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Physical Therapist's and Assistants EHT is approved in FL, TX, & OH for CEUs. See page 3 for details.

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Susan Weiss

Nancy Falkenstein

Featured Article:

Giving Stiff Joints A Moving Experience
by Karen Schultz-Johnson

Wouldn't it be great if you could position each stiff joint precisely at maximum tolerated end range with exactly the right amount of tension? Guess What? You can! That is what static-progressive splinting (SPS) does! And, when you choose a type of component that is infinitely adjustable such as a turnbuckle or MERiT™ component, you have the added benefit of infinitely adjustable tension and joint position. SPS is the technique of choice when you want to increase passive range of motion (PROM). Clinical experience has shown that elastic tension approaches simply cannot provide the same outcomes in terms of speed or amount of progress.

I was trained to use rubber bands early in my hand therapy career but intuitively was convinced that static-progressive approaches would deliver superior force. I searched for a way to replace elastic traction with SPS. In the mid 1980's, while working with a challenging patient, I had the "eureka!" experience that led to the design of the MERiT™ component. I tried it with many of my patients and then made it commercially available through my company, UE TECH. It has dramatically improved my ability to increase my patients' PROM. From the correspondence and discussions I have had with therapists all over the globe, many have shared this same outcome.

Hand therapists know that to achieve PROM gains, the stiff joint must be positioned as close to available end range as possible and maintained in this position for a significant period of time, often several hours. Elastic tension seems to offer a sound method to achieve this goal. However, the spring or elastic cannot maintain the joint at end range because it immediately stresses the joint beyond this position. While it appears that stressing tissue beyond end range would help

Figure 1

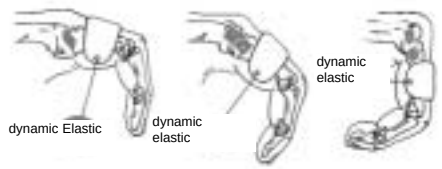

Figure 1: Elastic tension splints. An elastic component continues to shorten to the point where it tractions the shortened beyond their current available length. While this may seem desirable, it causes pain and ultimately creates micro-trauma and increased scar formation. The end result is decreased PROM.

Continue on page 2

gain motion faster, it does not. Tissue stressed beyond its available length suffers microtrauma.(Refer to figure 1). The body responds to this injury with inflammation and decreased PROM. To find an elastic component that takes the joint to the available end range, and not beyond it, with just the right amount of force is difficult if not impossible. The tendency will be to either overstress or understress the tissue. The result in either case is either failure to progress range or very slow progress.

CONTRASTING STATIC-PROGRESSIVE SPLINTING TO OTHER MOBILIZING APPROACHES

SPS applies torque to a joint via **inelastic** components in order to statically position it as close to end-range as possible. These components permit progressive joint position changes as PROM increases without changing the splint base structure. The different force generators vary in how they grade tension and joint position. (See Table One) Static Progressive (SP) splints require angle of pull adjustments as PROM progresses. When applied correctly, the SP splint holds shortened tissue at its maximum, tolerable length and does not stress

TABLE ONE
GRADABILITY OF STATIC-PROGRESSIVE FORCE GENERATORS

The higher the level of gradability, the more the patient can take advantage of small changes in tissue length and excursion by repositioning the joint at the new end range.

Infinitely adjustable
*Can change the joint position by a fraction of a degree and torque force by a fraction of a gram
*Types of SPS components: turnbuckles, *screws, *gears and MERiT™ components

***Potentially infinitely adjustable**
Progressive hinges have a continuous arc of motion and position the joint at any degree of ROM
*Physically difficult to progress joint ROM and torque exactly as desired

Grossly adjustable
*Offer approximate adjustment in ROM
*Types of SPS components: static line; hook/loop tapes; incremental hinges (change joint position in 10° to 30° increments)

figure 2

Figure 2 Static-Progressive splints. SP splints allow adjustable tension and changes in joint position at any time. They place tissue at maximum length and do not stress beyond it. The patient can immediately adjust the splint to capture increased tissue length and thus increase PROM.

continued on page 3

Attention Physical Therapists

Exploring Hand Therapy has been approved for CEU's in Texas, Ohio, & Florida for select courses

Texas These courses have been approved by the texas Board of Physical Therapy Examiners as meeting continuing education requirements for PTs and PTAs.
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24 hours

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beyond it (fig 2 page 2).
As tissue lengthens in response to this carefully applied stress, the clinician or wearer adjusts the joint position to progress tissue to the new maximum tolerable length. The process continues until the patient achieves desired tissue length and ROM goals.

In contrast to SPS, elastic traction splints create a mobilizing force with self-adjusting resilient or elastic components. Such splints allow active-resisted motion in the direction opposite of their line of pull. The tension generated continues as long as the elastic component can contract, even when the shortened tissue reaches the end of its elastic limit. While combining elastic components with inelastic components does increase the control over force generated, it is not the same as static-progressive splinting. (Figure 3) illustrates this concept.

(Figure 3 ABC)While combining elastic components with inelastic components does increase the control over force generated, it is not the same as static-progressive splinting.
Figure 3A uses elastic traction via rubber bands.
Figure 3B combines rubber bands with hook and loop tape. This still creates elastic tension.
Figure 3C uses static-line and hook and loop tape. This embodies true SP traction.

Yet another splint approach to increase joint PROM is serial-static splinting. While serial-static splints position restricted tissue at maximum, tolerable length, the clinician must remold the splint to accommodate increases in tissue length and progress to greater ROM.

ADVANTAGES OF SPS

So why should you choose SP force generators? What are the benefits of this approach to splinting? Because of its unique characteristics in setting ROM and force, static-progressive splinting has many advantages including:
**Patient-controlled force
**Enhanced splint tolerance
**Excellent compliance
**Maximum "dose" of end range time
** Potential for night time wear
**Works with soft- or hard-end feel joints
**Removability for hygiene, function and exercise
**Cost-effectiveness

PATIENT CONTROLLED FORCE

SPS allows the patient the ability to instantly progress the splint rather than waiting for the therapist. This results in rapid gains in PROM as the patient takes immediate advantage of incremental PROM increases and adjusts the splint for comfort. The patient remains

continued on page 9

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Test Your Knowledge

1. When accomplishing plastic deformation of tissue through stress relaxation; what type of splint would you choose?

2. You should only use static progressive splints with a hard end (feel) range. True or False

3. What type of splint applies torque to a joint via inelastic components in order to statically position it as close to end-range as possible?

4. Name at least three advantages of static progressive splinting.

5. To provide the optimum amount of torque force, each joint splinted will require its own individual SP component. True or False

6. Name at least three static progressive splinting facts according to the featured article.

7.Clik-strips is a form of static progressive splinting?
True or False

8. When fabricating a splint you can incorporate static progressive, serial casting, and/or dynamic splinting in one splint to meet the needs of the patient.
True or false

9. Name three implications of mobilization splints?

10. What is the general goal or passive range of motion expected per week, per joint, when successful static progressive splinting is achieved?

11. When fabricating mobilization splints, the therapist should consider specific precautions. List 3 precautions when dealing with SPS or any mobilization splints.

Answers on page 10

Splinting Tips and Tricks

**Static progressive splints can be fabricated using hinges, turnbuckles, nylon cord, non-elastic tape, strapping materials, screws and any material that is nonelastic in order to set the joint position and tension and achieve mobilization.

**The position of anti-deformity places the MP joints in the flexed position and the IP's in extension and is used to prevent collateral ligament tightness. It is also call the "safe position".

**Always warm material before cutting it to protect your own joints. Just don't get it too hot or you can overstretch the material.

**An alternative to a hole punch is a sodering iron to make holes in your splints. This technique will save your joints especially when using an older hole punch.

**To obtain smooth edges when cutting make sure your scissors are sharp and the material should be warm.

**When using a material that you are unfamiliar with you should try to consult the manufacture catalog to see the working time of the material before using it. The working time for materials ranges form 1-7 minutes. In general highly, perforated and thinner materials have a shorter working time while thick solid materials have a longer working time.

**Watch out when using narrow straps that you do not cause the patient compression issues. Wide, soft or neoprene straps will help to decrease compression and shear forces on the skin from narrow straps. However, the soft straps do not have as long as a life as the traditional hook and loop straps which may increase overall splint cost. One way to prolong the use of foam/soft straps is to reverse the strap once the original side wears out.

**If you use narrow straps you can pad the strap for comfort and decrease potential compression sites.

at end range until the patient re-adjusts the splint to optimize the combination of ROM and tension. The value of empowering the patient to adjust the splint cannot be overstated. My patients have readily learned and applied SPS adjustments. One patient, referred from another therapist with an elastic tension splint, had the opportunity to compare the two types when I converted his splint to SP. He emphatically preferred the SP splint and explained how much he enjoyed the ability to adjust the tension himself, both for comfort and to accelerate his PROM gains.

In contrast, elastic traction deprives both the clinician and the patient of control over force because springs and elastics deform over time. Even when the clinician thinks that he or she has set the splint tension, patients will change the type or the length of the rubber band or will deform the spring in an often futile attempt to control splint tension. Ultimately, the patient exerts the final control over a splint that exerts too much or too little tension when eventually, the patient removes the splint. In addition, with an elastic traction splint, the patient can pull against the force and shorten the tissue on an intermittent basis. This thwarts the entire splint purpose, that of holding the tissue at its maximum length for long periods of time.

MAXIMIZE SPLINT TOLERANCE, COMPLIANCE, & "DOSE" OF END RANGE TIME

Since the SP splint positions the joint precisely at end range with the appropriate amount of force and because the patient has the ability to increase and decrease tension, it maximizes splint tolerance. This fosters compliance in the form of consistent and multiple hour splint wear. The total end-range-time (TERT) directly affects the speed and amount of PROM gained. Thus, the dose of splinting that the patient receives is critical to achieving optimal outcome.

POTENTIAL FOR NIGHT TIME WEAR

With good splint tolerance comes the possibility of splint wear during sleep. Wearing the splint during sleep reduces or eliminates the need for daytime splint wear when the splint would interfere with functional use of the hand and exercise. The patient

CONTINUED ON PAGE 11

Test Your Knowledge

(Answers from page 6)

1)Static progressive

2) False

3) Static progressive splints

4) Advantages
*Patient-controlled force
*Enhanced splint tolerance
*Excellent compliance
*Maximum "dose" of end range time
*Potential for night time wear
*Works with soft- or hard-end feel joints
*Removability for hygiene, function and exercise
*Cost-effectiveness

5) True

6) SPS Facts
*While combining elastic components with inelastic components does increase the control over force generated, it is not the same as SPS.
*SPS effectively treats both soft end-feel joints and hard end-feel joints
*SPS is cost effective and not expensive
*SPS generates a wide range of force from extremely low to extremely high
*SP components can be used with any mobilizing splint design in place of any elastic component

7) True

8) True

9) Implications
*Substitution for loss of motor function
* Correction of joint deformity
*Provision of controlled motion
*Fracture Alignment
*Wound healing

10) 5 to 10 degrees per week

11) Precautions
* Patient's cognitive status
*Normal functional anatomy and biomechanics
* Force should be tolerable to the patient
*Pressure areas
*Monitor and adjust frequently
*Listen to patient; splint must fit well
*Decreased sensation or altered biomechanics

Ergo Tips and Tricks

Concern: Using a wrist rest while typing at a computer.

Comment: Wrist rests are designed to help with positioning the wrist and to limit extreme or awkward positions. The problem with the wrist rest, or any object, is the constant or static pressure from resting the wrists on the device. The median nerve is vulnerable on the volar forearm from static pressure. When a worker does not take breaks or keeps the wrist on the device compression of nerve can occur. One solution is to use the soft flex glove. (see photo) It is a great soft splint that takes the direct pressure off the median nerve while using wrist rests.

Problem: Unaware of high risk behaviors.
Solution: Become aware of high risk activities and modify or eliminate.

High Risk Postures and/or Activities to Avoid

**Sitting or standing in one position for long periods of time. Change your position often to relieve muscle strain.
**Using your wrists in flexion, extension, or a twisted position for long periods of time. Maintain a neutral (straight) wrist position when using tools, typing, writing or reading.
**Leaning on your elbows and wrists.
**Holding your head down and forward.
**Elevating your shoulders.
**Hitting the keyboard and other objects harder than necessary.
**Gripping tools, books, and utensils too tightly (adapted from working well ergonomics)

Problem: Not sure how to position the computer equipment.

Solution:
There are options for the height of the surface that supports the keyboard and mouse depending on what type of keyboard you use and your typing style. In all cases, the keyboard and mouse should never be higher than your elbows. To find your elbow sitting height you need have feet firmly on floor with knees just slightly lower than hips. Your hands should be even with your elbows or slightly lower. To determine the correct keyboard and mouse surface height for yourself consider the following:

** Place keyboard 1" lower than hands for an ordinary keyboard.

**Place keyboard equal to elbow height if you look at your hands to type.

** Your work surface (desk) should be about 2 inches above your working elbow height

(adapted from working well ergomonics)

receives approximately 8 hours of therapy during a period when little is usually accomplished therapeutically.

WORKS WITH SOFT OR HARD END FEEL JOINTS

A common misconception is that clinicians should use SPS exclusively with hard end-feel joints and elastic tension splints exclusively with soft end-feel joints. While many clinicians have found that SP splints demonstrate a high level of effectiveness with hard end-feel joints, they also find that SPS improves PROM of soft end-feel joints faster than elastic tension splints. Clinical experience has shown that elastic traction splints often fail to improve the PROM of "hard end feel" joints. This may be due to the splint tolerance factors described above and the inability for the patient with a hard end-feel joint to wear the splint long enough to experience adequate TERT to achieve tissue remodeling.

REMOVABILITY

In contrast to serial static splints such as serial casts, the patient can remove a SP splint for periods of exercise. AROM encourages functional organization of scar tissue and facilitates lengthening of adhesions in both directions. Motion promotes nourishment of cartilage and helps pump high protein edema into the lymphatics. Bash and Spur state, "Serial casting immobilizes the arm, interferes with the performance of home exercise and activities of daily living, and may cause stiffness in the opposite direction."

COST EFFECTIVENESS

SPS helps the therapist achieve successful outcomes as quickly as possible and with the least possible cost. The speed with which SPS succeeds results in a reduction in the number of treatment sessions. Bonutti et al demonstrated that SPS improved PROM in cases where no other conservative treatment approach was successful. Such proven efficacy demands that clinicians seriously consider this treatment approach. SPS accommodates increases in joint mobility without the need to remold the splint, saving the time for re-molding or re-fabrication to progress PROM that serial-static splints require. Many SP components are reusable, minimizing material expense.

Physicians and therapists have described patients with contractures who were scheduled for surgical release prior to application of SPS. Because of SPS's success, surgery was cancelled. When comparing the cost of SPS to surgical release of a joint, its effectiveness and fiscal efficiency becomes apparent. SPS has offered PROM improvement similar or better to that gained in surgery without the risks.

SPLINT REGIMEN

SPS generally follows the same regimen guidelines as any other splint type. Each clinician determines the appropriate splint regimen for a patient. After a brief trial period to determine tolerance, the clinician instructs the patient to wear the splint for longer periods of time. The clinician should keep this basic principle in mind; the more time the patient spends at end range, the faster the PROM limitation will improve. Adapt this principle for each patient.

In my clinical experience, the patient with a soft, springy end-feel contracture can wear the splint for 3-4 hours per day and obtain rapid, excellent results. At the other extreme, patients with well-established, hard end-feel contractures, may need to wear the splint as much as 23 1/2 hours a day, removing it only for hygiene to achieve PROM goals. Gains of 5°-10° at a joint per week indicate splint success. The splint wear schedule may require some experimentation before the clinician and patient discover the optimal one.

After clearly explaining scar's ability to remodel, the clinician instructs patients to position each joint so that they experience a mild to moderate stretch sensation at the joint or in the tissue adjacent to the joint. Patients must understand that gentle stress will give them the results that they seek. While wearing a splint may not be easy, it must be pain free. Clinicians will find it extremely helpful to instruct their patients that they will always experience stretch before pain. This will assist with proper tension adjustment. Patients must also understand that using too much tension will not increase PROM faster. Rather, high force will further injure the tissue, producing more scar and increasing the time until the joint moves as they would like. Seldom does a patient ignore these warnings when the clinician states the precautions clearly and emphatically.

SPLINT DESIGN

It is a common misconception that static-progressive splinting can only be used with certain splint designs. You can use SP force generators with any mobilizing splint design. Simply replace the elastic component with a static-progressive one. (See figure 4 page 12)

FORCE

To provide the optimum amount of torque force, each joint splinted will require its own individual SP component. Therapists have always used separate elastic com- continued on page 12

ponents for each joint in mobilizing splints and with good reason. Assessment of two adjacent stiff joints will almost always reveal that the amount of torque required to position each joint at end range differs and that PROM of each progresses at a different rate. With separate SP components, each joint will receive the correct amount of torque force and can progress according to its own unique rate. An exception to this "one-joint, one-component" rule is when the tissue restricting motion is not specific to the joint structure but rather the extrinsic soft tissue affecting a joint series, for example the MPJ and IPJ of the thumb, such as with extrinsic extensor tightness. Another exception, example is where the unique splint design, such as the UE TECH Final Flexion Splint--distributes the torque of one SP component to position each joint at maximum tolerable end range.

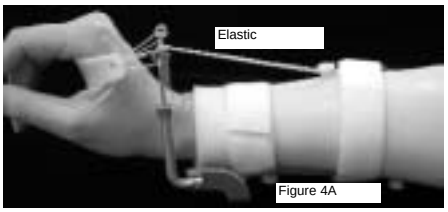

Figure 4B

Figures 4A & B depicts how you can use SP force generators with any mobilizing splint design. Simply replace the elastic component with a static-progressive one.

COMBINING SPLINT APPROACHES

Clinicians sometimes confront the challenge of a joint with limited PROM paired with the need for periarticular structures to undergo AROM. When AROM is essential and PROM is limited, the clinician should consider combining static and elastic traction approaches.

Clinicians may find that their patients can wear the splint in elastic traction mode during the day and in static-progressive mode at night during sleep. The clinician may also instruct the patient to alternate between elastic and static-progressive traction during the day.

Splints may also combine serial-static and static-progressive or static and static-progressive splints.The splint in figure 5A (pg. 14) illustrates the use of serial casts for PIPJ extension with static-progressive MPJ extension in one splint for a patient with extrinsic flexor tightness. An alternative design for the same problem, is shown in figure 5B (pg. 14). This splint puts a static finger extension platform together with static-progressive MP extension. The splint in figure 5C (pg. 14) effectively combined a static interphalangeal (IP) joint extension splint with static progressive flexion post metacarpal fracture when the patient lacked MCP flexion and IP joint extension. Continued on page 14

From www.AOTA.org

**A 2-year moratorium on outpatient therapy caps, included in the legislation, will provide protection for beneficiaries through 2005, and restore $700 million to outpatient rehabilitation. President Kornblau met with Senate Majority Leader Bill Frist of Tennessee, thanking him for his support of the 2-year cap moratorium.

**New Hand Special Interest Section Proposed
(January 16)--Efforts are underway to collect the 1,200 signatures needed to form a new Hand Rehabilitation Special Interest Section open to all AOTA members regardless of specialty practice

AOTA's Approved Provider Program (APP) is designed to promote the quality and relevance of continuing education (CE) activities offered to occupational therapy practitioners. **Exploring hand therapy, Inc. is an Approved Provider.

From: www.ASHT.ORG

**Relating to Custom made orthotics: CMS announces the Standard Unique Health Identifier for Health Care Providers for Use in Standard Transactions under HIPAA.
Filing and processing health care claims and other transactions will be used through one standard health identifier called the National Provider Identifier (NPI). This was announced as of late January and establishing standards is still underway. The date of this rule to be finalized is May 23, 2005. The need for NPI resulted from a mandate because of new HIPAA guidelines. For more information, http://www.cms.hhs.gov/media/press/release.asp?Counter=946
**CMS accepts comments on Proposed Regulations via Internet. CMS is introducing a new tool for citizens to make their voices heard. Everybody can visit: www.regulations.gov to submit any comments or concerns in regards to pending legislation.

From: www.HTCC.org

**The HTCC Board of Directors adopted this revised definition and scope of practice in May 2002

Hand therapy is the art and science of rehabilitation of the upper quarter of the human body. Hand therapy is a merging of occupational therapy and physical therapy theory and practice that combines comprehensive knowledge of the upper quarter, body function and activity. Using specialized skills in assessment and treatment, hand therapist promote the goals of prevention of dysfunction, restoration of function, and/or reversal of the progression of pathology in order to enhance participation in life situations for individuals with upper quarter disease or injury.

** Visit the HTCC website to learn more about hand therapy and the issues that effect practicing hand therapists.

figure 5A

Figure 5 AThe splint in Figure 5A illustrates the use of serial casts for PIP extension with static-progressive MP extension in one splint for a patient with extrinsic flexor tightness.

fig 5B

Figure 5B An alternative design for the same problem, the splint in Figure 5B puts a static finger extension platform together with static-progressive MP extension.

Figure 5C Effectively combined a static interphalangeal (IP) joint extension splint with static progressive flexion post metacarpal fracture when the patient lacked MCP flexion and IP joint extension.

fig 5C

The clinician can use multiple types of SP traction in one splint. The splint in fig. 6, shows a MERiT™ component tractioning the wrist into ulnar deviation while hook and loop tape exerts pull on composite thumb MCP/IP flexion for a patient post de Quervain's release.

figure 6

Figure 6. The clinician can use multiple types of S-P traction in one splint. This splint shows a MERiT™ component tractioning the wrist into ulnar deviation while hook and loop tape exerts pull on composite thumb MCP/IP flexion for a patient post de Quervain's release.

Using creativity and expertise, the clinician has many options and splinting combinations available to treat a patient's PROM problems. The clinician can apply the static-progressive approach to any joint in the upper extremity. (Fig 7)

Figure 7

Figure 7 When AROM is essential and PROM is limited, the clinician should consider combining static and elastic traction approaches in one splint

SUMMARY

Clinical experience and research has supported the efficacy of static-progressive splinting to improve PROM quickly and efficiently. With so many advantages, it is difficult not to consider static-progressive splinting as the technique of choice when faced with PROM limitations. The combined benefits of achieving precise torque and joint position with patient-controlled tension result in high splint tolerance, compliance and patient satisfaction. The static-progressive approach creates a highly effective means to deliver an adequate dose of total-end-range-time. Maximizing TERT will provide the achievement of treatment goals.

Clinicians report cases of improving PROM when no other approach worked. Due to their success with static-progressive splinting, clinicians have reported the cancellation of scheduled patient joint capsulotomies. SP splint components give clinicians the needed tools to achieve patients' goals whether it is avoiding surgery or increasing PROM in an efficient and cost-effective way. Nothing can give the clinician greater satisfaction.

SPS FACTS

**While combining elastic components with inelastic components does increase the control over force generated, it is not the same as SPS.
**SPS effectively treats both soft end-feel joints and hard end-feel joints
**SPS is cost effective and not expensive
**SPS generates a wide range of force from extremely low to extremely high
**SP components can be used with any mobilizing splint design in place of any elastic component

KAREN SCHULTZ-JOHNSON MS OTR FAOTA CHT received her Master's of Science degree in Occupational Therapy from California State University at San Jose 1982. She has specialized in hand rehabilitation since 1978. She has been an active member of the American Society of Hand Therapists since 1983 and a member of the ASHT board from 1985-1992. Karen participated on the editorial board of the Journal of Hand Therapy for 3 years from 1987 - 1990.

Karen became a certified hand therapist in 1991 and is certified in pain management. Karen is the owner and director of Rocky Mountain Hand Rehabilitation in Edwards (Vail), Colorado. She owns UE TECH and has designed splints and exercise equipment that are distributed internationally. She is an adjunct faculty member at Rocky Mountain University of Health Professions in the Doctor of Science program in Hand Rehabilitation.

Karen has worked as a consultant to sports medicine clinics to set up hand therapy services. She has provided ergonomic consultation to offices and industries. She has helped therapy vendors develop and market products and product lines.

Continued on page 15

A published author, Karen's works include articles in Journal of Hand Therapy, and the Journal of Hand Surgery, among others. She is the author of The Schultz Upper Extremity Pain Assessment, Volumetrics--a Literature Review and Static-Progressive Splinting. She contributed two chapters- "Work Hardening and work Conditioning" and "Upper Extremity Functional Capacity Evaluation" to the respected text, Rehabilitation of the Hand Vols 4 & 5. She served as editorial consultant for Introduction to Splinting: a Clinical-Reasoning and Problem-Solving Approach 2nd Ed.
Karen has spoken internationally on many topics related to hand rehabilitation including upper extremity anatomy, evaluation, splinting, work related programs and cumulative trauma disorders.

Karen received recognition as a Fellow of the American Occupational Therapy Association for her special contributions to Occupational Therapy. She was elected to "Who's Who of American Business Leaders" in 1994 and to "Who's Who of Professional and Business Women" in 1999 for significant career achievements and contributions to society

For additional information about the MERiT™ device please visit www.uetech.com or call 800-736-1894

Don't forget to mention Exploring Hand Therapy (EHT) newsletter to receive free monograph static-progressive splinting by Karen Schultz-Johnson with any MERIT product purchase

Thank you Karen for your invaluable input. You are an inspiration to us and the hand therapy community.

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CONGRATULATIONS to all the therapists that passed the HTCC exam in November 2003 Great Job!!!

Dear Susan and Nancy,
It is with great pleasure and appreciation I write to let you know how instrumental your products were to me. I can recommend with complete confidence your book and on-line courses to anyone who desires to gain a deeper knowledge of hand rehabilitation. Your products are priceless!! They are a must for anyone wishing to successfully prepare for the CHT exam.
As you know, I took the exam in November (first time) and am now a CHT!!

Marlisa Nolan OTR/L CHT

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A JAS Static Progressive Stretch (SPS) splint restores range of motion in joint contractures by delivering the benefits of the biomechanical principle of stress relaxation. Stress relaxation is the method a therapist uses to manually stretch a joint in the clinic. The unique design of the devices eliminates the risk of joint compression, as well as, offering soft tissue distraction. The treatment sessions are patient directed and the protocol calls for short 30 minute durations

Visit this website for more info: http://www.theratechequip.com/jas.htm

Static Progressive Stretch to Reestablish Elbow Range of Motion

Peter M Bonutti, M.D., Jeffrey E. Windau, B.S.,** Brent A. Ables, M.S.,† and Bryan G. Miller, Ph.D.‡*

Static progressive stretch (SPS) is a technique using the biomechanical principle of stress relaxation to restore range of motion (ROM) in joint contractures. Existing techniques such as dynamic splinting and traction rely on a time-dependent material property, creep, which applies to continuous load. Other techniques, such as serial casting and static splinting , are time intensive and usually require assistance by a therapist. This study evaluates SPS via a new orthosis that directly applies SPS incrementally through patient controlled therapy, allowing for stress relaxation of contracted tissue. Patients used the device in 30-minute treatment protocols. The length of treatment time varied between one and three months. Twenty patients with elbow contractures who had limited success with other treatment modalities including serial casting, dynamic splinting, physical therapy, and/or surgery, underwent SPS using the new orthosis. The increase in motion for the 20 patients in the study averaged 31° (69%). All patients expressed satisfaction, with no complications and no deterioration in ROM at the one-year follow-up evaluation.

This article is continued at: http://www.theratechequip.com/article2.htm

For additional research info go to:
http://www.jointactivesystems.com/research.html#Burn%20Joint

Static Progressive Splinting: Up Close and Personal

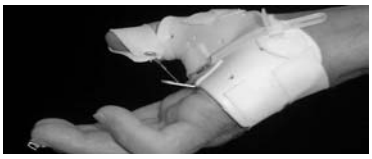
On-site course: March 6, 2004-- Don't worry if you miss it. View on: CD, DVD, or Internet Available March 20, 2004

Course Description
This course is excellent for occupational and physical therapists, COTAs, and PTAs evaluating, treating, and making splint recommendations for the hand and arm.

*Instructional methods include: PowerPoint, lecture, and demonstration.

* The splints are fabricated slowly while you view fabrication on a huge screen. Video/DVD production comes with course to allow you to literally take the course home with you! This is an intermediate level course.

Upon completion of this course you will:
*Familiarize yourself with anatomy and how it applies to splinting.
*Become familiar with splint material properties for successful splint designs.
*Learn how to fabricate a variety of static progressive splints.
*Learn a variety of marketplace static progressive splints available.
*Learn tips, tricks and techniques to make splinting simple.



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