**Consulting Orthopedists**

**E-Newsletter Copy**

TEASER:

**Miracle Metal Promises New Hope for Adolescent Scoliosis** – If you know any adolescent with idiopathic scoliosis who has to wear a brace, you may also know the devastating effect bracing can have on adolescent psychological development. But now there is a surgical procedure using new vertebral staples of a miraculous alloy of nickel and titanium that produce excellent results in controlling the progression of adolescent idiopathic scoliosis.

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**Miracle Metal Promises New Hope for Adolescent Scoliosis** – If The current standard of care for adolescent idiopathic scoliosis presenting a curve of 20° to 40° is bracing, often for 14 to 23 hours a day for 4 to 5 years. But, as reported in a recent article in *Clinical Orthopaedics and Related Research*, bracing is only modestly effective at best, with 18% to 50% of curves progressing despite the bracing. When you add in poor patient compliance due to the impact of social stigma on self-esteem, the effectiveness of bracing is reduced even further. Clearly a new, more effective therapy is needed.

Vertebral stapling for growth modulation and curve stabilization was used to treat adolescent idiopathic scoliosis (AIS) as early as 1954, but the results were disappointing because the staples tended to break or come loose. But now new staples made from a nickel (Ni) and titanium (Ti) alloy developed in 1963 by the US Naval Ordnance Laboratory (NOL), called Nitinol, have been used with outstanding results.

Nitinol is a biologically safe “shape memory” metal with the amazing property of being able to be easily bent into any shape when cold, only to return to its original shape when warmed up. The temperature at which this transformation occurs is controlled in the manufacturing process. This means that a “C” shaped staple can be made which can easily be straightened into a “U” shape in ice water, then, when the ends of the staple are inserted into pilot holes drilled in adjacent vertebrae, they clamp down as they warm up to provide a grip very unlikely to fail. This property is also exploited in the manufacture of self-opening coronary stents.

Nitinol is also superelastic. This means that, within very wide failure limits, Nitinol will return to its original shape no matter how often or how much it is bent, giving patients with vertebral staples a full range of motion. In the study referenced above, 39 consecutive patients had vertebral body stapling of 52 curves and those 8 years or older with less than 50° of preoperative curve and a minimum 1 year follow-up showed a ***coronal curve stability of 87%*** when defined by progression less than or equal to 10°.[[1]](#footnote-1)

If you have any questions about Nitinol stapling or you know any young scoliosis victim who wants to get out of their brace, please contact us.

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TEASER:

**CELEBRITY PROFILE – Rene Russo** - 'You can have a hard time as a kid and still make it.' I am an example. I came through."

Rene Russo

Supermodel, Actress, Scoliac

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**CELEBRITY PROFILE – Rene Russo** - Former supermodel Rene Russo is now an actress who has starred in such blockbusters as *Ransom* and *Lethal Weapon 3* with Mel Gibson, *Tin Cup* with Kevin Kostner, *Outbreak* with Dustin Hoffman, In the Line of Fire with Clint Eastwood and *Get Shorty* with John Travlota. But behind all that glamour and success is a woman still recovering from a painful childhood. Diagnosed with scoliosis at age 10, Rene wore a body cast 48 weeks a year until she was 14. "Every six months, I got a two-week break."

Feeling alone and alienated, Russo dropped out of high school and floundered through her teen years. She says, "I didn't have low self-esteem -- I had no self-esteem." One of her only bright spots was high-school friend, director Ron Howard. While other kids teased her for wearing a body cast, "he was always lovely to me." But later, in therapy, Russo learned that her view of herself was a reflection of how her father, who had abandoned her early in life, related to her.

Today, she's admired in Hollywood for her lack of vanity, given her beauty. The reason, Russo says, is that, "I'm fighting to like myself, not fighting to keep my ego in check." In a photo of herself at 17, "I have this tough look on my face, like I thought I was the coolest chick. You know what? It was a cover." Now when she sees that picture, "I want to give myself a big hug." If you have pain from your past, find ways to embrace the child you were, Russo says. "Nurture yourself. Like yourself." The message of her life is this: "It's about hope. You can have a hard time as a kid and still make it.' I am an example. I came through."

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TEASER:

**PERSONAL PROFILE: Baylor Scoliosis Center Care Coordinator Treva Aldrich** helps patients turn fear and anxiety into hope and excitement. Yet the approach she takes toward her work is simple. “I try to give them (our patients) as much information and compassion as I can.”

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**PERSONAL PROFILE: Baylor Scoliosis Center Care Coordinator Treva Aldrich** - Treva Aldrich turns surgical procedures into life-changing surgical experiences for patients from all over the world. She began her career in Florida 16 years ago as a young person just looking for a job. When she landed a job in a hospital, she soon found she had an intense interest in the field and enjoyed working with patients.

When her family moved to Texas five years ago, she landed at the Baylor Scoliosis Center. As a Care Coordinator, Treva communicates with all the Center’s potential patients to answer their questions and determine if the Center can help them. Once she determines that the patient can be helped, she assists in making all the arrangements necessary to get them to Plano to see Dr. Shelokov. When they arrive, she coordinates all their testing and surgical appointments and tries to make their whole experience as positive and pleasant as possible. As she puts it, “I try to give them as much information and compassion as I can.”

When asked to reveal the most challenging aspect of her work, Treva said it was the painful task of having to tell some patients that they are not eligible for surgery, almost always due to the patient’s advanced age. The Baylor Scoliosis Center helps many people other centers cannot but when people are in their seventies or eighties, not even Dr, Shelokov can’t help.

Conversely, Treva finds the most rewarding aspect of her work telling patients the good news. She says, “I talk to patients who have been told for many years that they cannot be helped, that they would have to learn to live with whatever pain or symptoms they have for the rest of their lives. Then somehow they find us, by the web site or an ad, and when they get to me I get to tell them, yes, there is hope for straightening their spine and getting a better quality of life. That’s very rewarding. You can hear the excitement in their voices. That alone is very gratifying. Even before we do anything, we sit we listen and they know there’s hope out there.”

Treva feels she has a bright future working with the Baylor Scoliosis Center. She says, “The Center has the ability to reach a lot of patients, because of the name of the hospital and the quality of care that we offer. I think that we understand and empathize with what our patients go through, the good and the bad. We understand that scoliosis treatment is not just a physical but an emotional decision for them. They’ve lived with their symptoms their whole lives and it not just a matter of just going in for a little surgery and then getting right back to business as usual. I think that we’re very specialized in focusing on all of their needs.”

For someone who got into the medical field by chance – or even for someone who got in on purpose -- Treva Aldrich is as dedicated, professional and compassionate as they come.

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TEASER:

**Yoga for Scoliacs** – One of the most ancient self-improvement practices in the world offers hope for scoliacs. If offers the possibilities of lengthening back muscles, offsetting curvature and rotation, and relieving pain and tension. Here are 11 yoga postures you can do on your own, almost anywhere.

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**Yoga for Scoliacs** – The following information comes from an article by Elise Browning Miller, M.A. in Therapeutic Recreation and a certified yoga teacher from Palo Alto, CA.

Yoga has been used for over 3,000 years to cultivate inner peace, an open heart, a calm mind, and a strong, relaxed body. The practice of yoga focuses on postural alignment and awareness of imbalances throughout the body. For someone with scoliosis it is very important to both lengthen and strengthen the muscles that support the spine in order to relieve tightness and pain.

Yoga offers many postures where the spine is simultaneously being lengthened and the long muscles of the back are strengthened which together can help offset further curvature and rotation. Standing poses, for example, strengthen the legs which creates a solid foundation from which the spine can stretch and become freer. This enables the legs, rather than the spine, to carry the weight of the body. Other yoga postures that stretch the hamstrings, hip flexors, and quadriceps, the key muscles that not only create more mobility and strength but actually help improve posture. And other postures loosen the large muscle from neck to base of shoulder blade.

Yoga also emphasizes breath awareness while doing the postures. With scoliosis, there is often a decreased breathing capacity particularly on the concave side, because the muscles between the ribs have decreased in their elasticity and strength. By sending the breath into the collapsed ribcage on the concave side, one can actually stretch these muscles and create more lung capacity as well as more evenness of the sides of the body.

The following are beginning yoga postures that you can do on your own. As you progress, it is recommended that you receive the guidance of a yoga teacher to assist you in learning more advanced poses so they can give you guidance of proper alignment for your scoliosis. Please remember to breathe while holding these poses. You may start to hold these poses for a half a minute and build up to a minute.

1) Right Angled Wall Stretch - Place hands on the wall shoulder width apart at shoulder level and walk the feet back placing them hip width apart under the hips. Push palms into wall and lengthen spine. Keep lower back in. As the shoulders become more flexible, you can bring the hands to hip level to form a true right angle

2) 3-Part Kitchen Sink Pull

a) Pull back from kitchen sink, railing or ropes. Feet are in towards sink and legs are straight.

b) Walk feet forward so when you bend knees, legs are at a right angle as if sitting in a chair. Bring ribs to thighs. Pull back.

c) Walk feet in a few inches. Drop buttock to a squat and pull back.

(May also do with a partner)

3) Pelvic Tilts Pose

a) Dog Tilt: Tailbone, sitting bones lift. Lower back in. Head lifts. Inhale.

b) Cat Tilt: Tailbone, sitting bones down. As palms press down, lift mid back bringing navel to lower back and spread shoulder blades. Head drops and neck releases. Bring concave side of back up to ceiling more to even the sides. Exhale.

4) Extended Puppy Pose - Stretch the hands out in front. Move the buttock halfway back to the heels and press down through the hands as you pull back through the hips. Move hands toward convexity if extreme lateral curve and feel ribs and spine come towards the center. (i.e. move hands to right if you have right thoracic scoliosis)

5) Lunges

From a standing position, bring right foot forward and back knee down. Lunge forward so front knee is slightly over ankle bone. Feel stretch in back thigh and groin. Variation-Bring back knee off and stretch through heel.

6) Hip Opener - (piriformis Stretch)

On all fours, bring right foot and knee forward and place on floor. Square hips and slide left leg back. Slowly come down with hands out in front. If you come far enough, place elbows on floor. Reverse.

7) Back Strengtheners

a) On tummy, Arms out in front. Lift right arm and left leg. Stretch, take five breaths holding the position. Reverse and repeat again on each side.

b) Place hands on a low ledge at least 8 inches from floor or seat of a chair if shoulders are flexible. Press down through palms as you lift up through crown of head. Breathe. Repeat a second time.

8) Hamstring Stretch – Lying on the floor, bend right knee to chest and place belt or strap around ball of foot. Slowly straighten leg and stretch through heel. Reverse.

9) Abdominal Strengthener - Legs on floor. Bring right leg up to 90 slowly bring down to 60, 30, a few inches from the floor and relax. Reverse legs. Do both legs as you get stronger. Arms down by side or overhead as you get stronger.

10) Gentle Twist – Lying on the floor, bend right knee and place foot on left thigh, move onto side left hip and twist left knee over towards floor as you simultaneously look to right and keep right shoulder down.

11) Relaxation - Place a hand towel or washcloth under concave side of back as you lie evenly on the floor. Lie on back with blanket under head and knees. Align your body and let go of all tightness in your body from head to toes. It is advisable to stay in the relaxation position for at least 5 minutes letting go of all tension.

For more information or to obtain a video that demonstrates all these postures, write Elise Browning Miller, P.O. Box 60746, Palo Alto, CA 943406 or go to <http://www.yogaforscoliosis.com>.

1. Vertebral Body Stapling Procedure for the Treatment of Scoliosis in the Growing Child, Randal R. Betz, MD; Linda P. D’Andrea, MD; M.J. Mulcahey, MS; and Ross S. Chafetz, DPT, Clinical Orthopaedics and Related Research, Number 434, pp. 55-60, Lipincott, Williams & Wilkins 2005 [↑](#footnote-ref-1)