



Seize life

Enjoy every minute

Embrace competition

Return to an active lifestyle

# Fitter, faster and stronger.

THE  
STONE  
FOUNDATION  
*for Sports Medicine and Arthritis Research*

Winter 2003-2004

## FOCUS ON The Stone FOUNDATION

2003 saw strong, steady progress at The Stone Foundation for Sports Medicine and Arthritis Research. Our research on improving paste grafting of articular cartilage for arthritic and traumatic lesions and meniscus replacement for arthritic knees was published and presented as abstracts, presentations, and instructional courses. We conducted the first human clinical trial of a pig tissue-based ligament device deployed for reconstruction of torn anterior cruciate ligaments in human knees. Basic science studies conducted by independent laboratories confirmed the superiority of The Stone Clinic cartilage restoration procedures when compared to several alternative methods. Surgeons introduced to The Stone Foundation's work continue to adopt techniques developed here for their own use.

## spotlight on The Stone Clinic

### It's been a busy year for The Stone Clinic.

A growing number of patients continue to benefit from the improved techniques we develop. To provide a great patient experience, we've expanded our staff and made a significant investment in a new high-field MRI unit. In collaboration with ONI Inc. and our top-flight orthopaedic radiology team led by John Crues, M.D. and Mark Coleman, R.T. (R), we are able to optimally image cartilage repair and soft-tissue injuries to a degree of accuracy previously unknown in office imaging.

The Stone Clinic team published our first book, *Comprehensive Sports Injury Management*, co-authored with Jim Taylor, Ph.D. The book helps patients receive top quality care from their health care providers, while undergoing the rehabilitative process.

We believe well-informed patients can play a powerful role in their own recovery, so we continue to provide helpful articles and useful information on our recently redesigned website at [www.stoneclinic.com](http://www.stoneclinic.com).

On a more personal note, Dr. Kevin R. Stone was honored with a Doctor of Humane Letters Honoris Cauasa from the Pacific Graduate School of Psychology for his philanthropic efforts in the community. He addressed this year's graduates at the PGSP commencement with encouragement to leverage every second toward a greater good (See Commencement Address, back page).

In 2003, the Arthritis Foundation recognized Dr. Stone's contribution to the field of arthritis by making him a member of the Arthritis Foundation Scientific Committee. Dr. Stone hopes to encourage the Foundation to expand its focus from inflammatory arthritis to include sufferers of traumatic arthritis.

The clinical, rehabilitation, scientific research, and entrepreneurial teams housed at The Stone Clinic and The Stone Foundation for Sports Medicine and Arthritis Research wish you a healthy and active 2004.

*The Team at The Stone Clinic and The Stone Foundation*

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Every Second Counts

## FDA Approves CrossCart Ligament Device Pilot Trial

CrossCart Inc., a biotechnology company based at The Stone Clinic, continues its progress in bringing the technology of anti-gen stripping of animal tissues to human application by initiating a pilot study of its ligament device. The device, a treated pig tissue, was approved by the FDA and the Institutional Review Board of the California Pacific Medical Center for implantation into ten patients who had suffered tears of their anterior cruciate ligament (ACL). Ten patients underwent the surgery led by Dr. Stone with Ann Walgenbach, RNNP, and have been following their rehabilitation program at The Stone Clinic. The patients include a top free-skier and a ski instructor, as well as recreational athletes. If they continue to do well, a wider clinical trial of the device will be proposed to the FDA in 2004. The company and its research team are turning their attention to bone, tendon, and cartilage replacement from pig sources.

## Joint Juice Update

### Joint Juice Goes National

Joint Juice Inc., the glucosamine beverage created at The Stone Clinic, is now sugar-free and available in convenient eight-ounce cans. Stores, including Albertson's, Safeway, Costco and Sam's Club are rolling out Joint Juice nationwide. Jack Robertson joined the management team as CEO with ambitious plans to make Joint Juice a part of everyone's daily diet. We continue to believe that glucosamine is a critical part of joint nutrition and can significantly aid joint preservation and repair processes.



## Marla Streb Rolls On To Win

Marla Streb is not your ordinary gonzo mountain biker. She's a gonzo mountain biker with a Master's Degree in molecular biology, a trained cytogeneticist, and a former AIDS virologist at the Scripps Institute.

In 1994, Streb began competing in mountain bike races. When she broke her collarbone at a photo shoot for her first sponsor and asked for a new wheel instead of a trip to the emergency room, they signed her for downhill. Streb's career had begun.

First place finishes soon piled up, with key victories in 1999, 2000, and 2001. In 2002,



*Marla Streb racing to the finish line.*

injury forced Streb out of competition. Facing the end of her mountain biking career, she came to us at The Stone Clinic.

Marla underwent a complex reconstruction of her ACL and her posterior lateral corner (outside of the knee ligaments). Following surgery, we began an intensive rehabilitation program designed to strengthen her knee specifically for downhill mountain bike racing. Within months Marla was back on the bike, riding fitter, faster and stronger than before she was injured. Nine months after surgery, Marla captured the 2003 National Downhill Championship. In September, she won her first World Cup race in Kaprun, Austria.

Streb is exultant. "It's been my best season ever! I owe much of this success to The Stone Clinic. Dr. Stone's philosophy of aggressive rehabilitation was exactly what I needed to resume my normal training. Comparing my recovery times to friends who had similar surgeries, I was healing twice as fast, albeit with a lot of work. Now that my leg has more stability (than perhaps I was even born with) my racing performance has exceeded all expectations!"

### Joint Juice Gets Two Thumbs Up!

"I've had Osteoarthritis in both joints of my thumbs for about 10 years. I'm 60 years old and in relatively good health. I play a lot of golf and I've always had to take Aleve for pain. I have been taking Joint Juice for about two-and-a-half weeks and the pain has just about completely gone away. Thank you for this wonderful product."

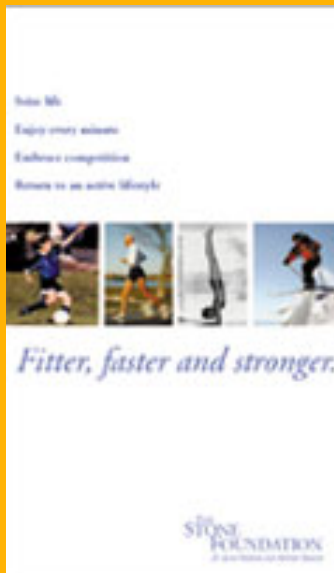
--Phil Mackenzie  
Fountain Hills, AZ

### Close Up on High Tech

#### New High-Field MRI Scanner Provides More Accurate Images

The Stone Clinic added an ONI dedicated extremity MRI scanner to deliver the best joint care possible. This scanner, a 1.0 Tesla high-field magnet, leads the field in delivering accurate imaging of injuries in knees, ankles, feet, elbows and hands. Dr. Stone with Dr. John Crues and Frank Shellock, Ph.D. will use the high-field scanner to research cartilage injuries and repair techniques as well as ligament replacement surgeries.

# Help Support The Stone Foundation



The Stone Foundation is dedicated to improving the science of orthopaedic surgery. We create scientific studies to monitor the outcomes of new techniques, the success of new medical devices and the effectiveness of new treatments. We recruit the top experts in the field. We consult with authorities to help develop, implement, and monitor our studies. We write papers, publish in prestigious medical journals and then teach the techniques to surgeons around the world. It's no surprise many of the ideas and methods created by The Stone Foundation are the first of their kind—or that Dr. Stone is the author of over 50 issued U.S. patents.

If you are reading this, chances are your life has already been dramatically improved by the work of The Stone Clinic. But what about the next person suffering the constant pain of osteoarthritis? Or facing a career ending

injury? Your contribution to The Stone Foundation supports work that can make a difference in treating a friend, a loved one, or yourself.

We need your help. Your donations will be leveraged by The Stone Foundation to fund scientific research that can help thousands of arthritis sufferers and injured athletes. Support the development of innovative medical devices. Contribute to new procedures that speed medical recovery. Reach coaches of young athletes with a powerful message of injury prevention. And provide the Bay Area dance community with donated medical services.

With your help we can treat more patients, help more athletes, and deliver more successful outcomes.

## Here's How You Can Help:

**Endow a Director of Research chair**

**Fund a cartilage graft or meniscus transplantation study**

**Underwrite an injury rehabilitation and prevention clinic for world-class athletes**

**Sponsor a visiting surgeon fellowship**

**Contribute to our ongoing operations and research efforts**

In addition to Dr. Stone, the on-site team includes the following people. You may e-mail them with questions by using their [first name@stoneclinic.com](mailto:first_name@stoneclinic.com)

### OFFICE AND ADMINISTRATION

Jennifer Bott, *Reception*

Sharon Lang, *Office Manager & Billing Coordinator*

Elaine Lowell, *Office Assistant*

### NURSING

Ann Walgenbach, *R.N.N.P., M.S.N. - Nurse Practitioner*

Lola Ramirez, *LVN, Nursing Assistant & Patient Coordinator*

### RESEARCH

Martin Hill, *Ph.D Director of Clinical Research. Database Coordinator, The Stone Foundation*

### RADIOLOGY

Mark Coleman, *R.T. (R) - Radiology Technician and MRI Technician*

### PHYSICAL THERAPY

Susanne DeCosterd, *MPT – Physical Therapist*

Nicki Flanagan, *PTA - Physical Therapy Assistant*

Laura Keller, *PT - Physical Therapist*

Maureen Madden, *PT - Physical Therapist*

Devin Wu, *MS, PT - Physical Therapist*

### JOINT JUICE, INC.

Jack Robertson, *CEO, Joint Juice, Inc.*

Stewart Irving, *V.P. Operations, Joint Juice, Inc.*

Marty Lambrechts, *V.P. Sales, Joint Juice, Inc.*

Lance Palumbo, *Distribution Manager, Joint Juice, Inc.*

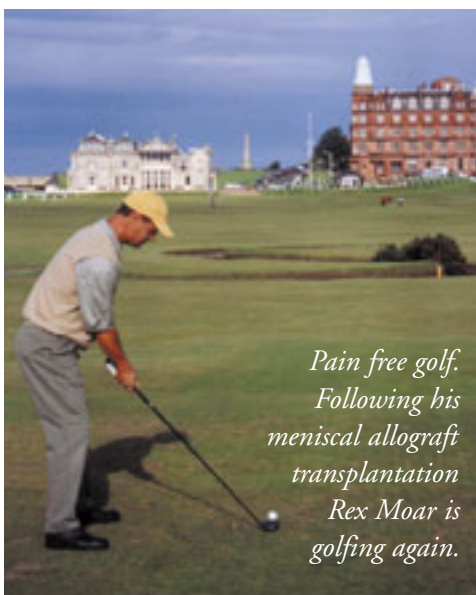
### CROSSCART INC.

Damon Somers, *Chief Operating Officer, CrossCart, Inc., CFO Joint Juice, Inc.*

Thomas Turek, *Senior Scientist, CrossCart, Inc.*

## Patient Update

### Rex Moar



*Pain free golf.  
Following his  
meniscal allograft  
transplantation  
Rex Moar is  
golfing again.*

When Rex Moar came to The Stone Clinic, the pain in his knee was so bad he could barely walk. Following an initial consultation, our MRI scans determined that Rex had shattered his meniscus (the spongy shock absorber in the knee) and developed severe osteoarthritis in his knee. All Rex wanted to do was to play with his 14- and 11-year-old children, ride his bike, and play golf pain free. Dr. Stone recommended meniscal allograft transplantation, along with an articular cartilage paste graft.

20 months removed from his surgery, Rex tells us he is “doing great! I have been so busy enjoying my new knee that I have not had time to write. I have gotten better each month since the surgery, with an occasional soreness creeping in, but nothing that a couple of icings and a day of rest can't cure.”

Rex explains he did have one minor setback six months after surgery. He states, “I went to England and Scotland and did the tourist thing as well as played golf three times (you have to walk in Scotland) and boy, was I sore! When I got home I was having second thoughts about the surgery, thinking that it didn't work. I could not have been more wrong. I came in for some rehab from your staff, and I have been GREAT since! Your physical therapy and rehab staff has got to be the best around!”

Today Rex reports “I am playing golf 1-4 times a week (I still ride in a cart), riding my bike (not often enough) and playing with my boys. I could not be happier with my decision to have you perform surgery.”

## Q&A with the Rehabilitation Team

### Someone told me squats are bad for my knees. Is this true?

Squats can be an excellent exercise for the knees, if done correctly. Squats incorporate the major muscle groups in the lower body (glutes, quadriceps, hamstrings, and calves) and simulate functional movements that we perform during our daily activities and during many sports.

To perform a squat with good form, stand with your feet shoulder-width apart. Concentrating your weight into your heels, reach forward with your hands and sit back as if to sit in a chair that is slightly too far behind you. Your knees should stay over your ankles—never over your toes. As you return to the starting position, push through your heels and stand up. You can add weight to your hands as you progress. Do not exceed 30 repetitions in a set.

### Is the Stairmaster a good exercise for the knees?

The Stairmaster can be a wonderful cardiovascular exercise. Unfortunately, many people do not perform the exercise correctly. We often see gym patrons take deep steps while standing up on their toes on the Stairmaster. This places unnecessary stress on the

patellofemoral joint. You can prevent some of the stress placed on the knees by standing with the entire foot on the pedal and thrusting the hips slightly back. Stationary bicycles, Versa-climbers, and elliptical machines are more “knee friendly” cardiovascular machines and are a better choice if they are available.

### How important is shoe wear, and how do I know which shoes are best?

To prevent injury, it is critical to choose the right shoes for your activity and for your type of foot. Good running shoes are designed to accommodate one of three foot types: over-pronating, over-supinating, or the neutral foot. To determine your foot type, stand relaxed in front of a long mirror. Generally, if the arches of your feet are close to or touching the ground, you are an over-pronator. If your arches are high and you are unable to actively make them flat, you may be a supinator. If your resting position shows an arch that is off the ground and you can easily move from a flat-footed to a high arched position, you have a neutral foot.

To find the right shoe for you, shop at a reputable runner’s store, not a generic sports store. The sales person will help you identify

your foot type. Inform the sales person about the mileage you intend to run and the surfaces you will run on. Ask to try at least three styles of shoe that fit your type of foot. Then run around the block and assess which shoe feels best. The differences may be subtle, but you should be able to choose the pair that you could “run in forever.”

If you still experience pain in your feet or knees while running, stop in to see our physical therapists. We can help you identify your foot-type and function more specifically.

### Is the knee extension machine good or bad for my knees?

Using a knee extension machine to strengthen the quadriceps risks damaging the patellofemoral joint (knee cap) and the patellar tendon. We never recommend this exercise. To train the quads in a functional manner we advocate split squats, squats, rotation-lunges, step ups, no-seat biking, single leg reach dips, and lateral leaps. Exercises like these, which work multiple joints simultaneously, are the most efficient way to train. None of these exercises require gym machines, so you can do them at home using only free weights.

## Ski Tips from the Pros

### Circuit Training for Injury Prevention

According to Stone Clinic patient and professional skier, Evan Raps, “Putting in the time to do cardiovascular training will give you stamina to ski longer days and have a longer season. Cardiovascular endurance prevents the fatigue that can lead to injury. Good stamina lets you attack the slopes all day long.”



*Ski longer and stronger. Time in the gym can mean more time on the slopes.*

When Evan goes to the gym, he completes a 30-40 minute cardiovascular training circuit that includes 3-to-4 minute intervals on the Versaclimber, bike, elliptical trainer, and treadmill. “Circuit training works better for me. Four minutes on each machine means I can stay focused and work harder.”

Evan combines his cardiovascular program with core strengthening, plyometrics, and proprioceptive exercises (that help him sense his body in space) using free weights, a gym ball, and many movement drills. To combine cardio exercise with proprioceptive training, Evan recommends trying a session on the Versaclimber with no hands or using the treadmill with one or both eyes closed. To add core strengthening to your workout, try riding the spin bike while leaning toward the handles with both hands behind your back.



### Skate Your Way To Skiing Fitness

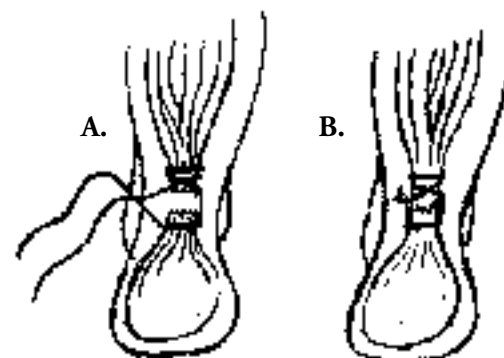
Stone Clinic fan and Olympic Gold Medalist Jonny Moseley says in-line skating is a great way to get fit on dry land and maintain your edge during the off season. Moseley recommends interval training to make rapid progress. Skate hard for 2 minutes then take a 1 minute break, then skate hard for another 2. Repeat the cycle for 20 minutes. “To add intensity, bring along a friend,” Moseley says, “and pull them behind you attached to a bungee cord.”

## Percutaneous Achilles' Tendon Repair

"I heard a loud shot and felt immediate pain at my heel," says the 48-year-old male tennis player. The "shot" is the Achilles' tendon rupturing. The injury is widely feared due to the pain and four month recovery from open surgery. In 1991, Dr. Stone improved upon a percutaneous suture repair method designed to return patients to full strength and full motion without the risk of a large incision.

The method involves weaving a suture through small skin punctures and cinching the torn tendon together. The procedure eliminates the need for a long incision and significantly decreases recovery pain, scarring, and infection risk. A four-month exercise and soft tissue massage program is critical to post-op protection of the repair.

Results have been excellent, with only one traumatic re-rupture in the past 12 years.



*Percutaneous suture repair sews up torn tendons without the need for large incisions.*

## Staff Spotlight



**The Stone Foundation appoints Martin Hill, Ph.D as Director of Clinical Research**

The Stone Foundation underscored its commitment to research with the appointment of Martin Hill as Director of Clinical Research. Martin will conduct follow-up studies on articular cartilage and meniscus replacement, pursue grant acquisitions, and deliver presentations on the work of the Foundation.

Martin brings more than 15 years experience in statistics, pharmacology, and lab research. His background in health research includes working for the California Environmental Protection Agency and the California

Department of Health Services. Martin received his Doctorate in Applied Statistics from Arizona State University in 1993. He can be reached at [research@stoneclinic.com](mailto:research@stoneclinic.com).



**Mark Coleman, R.T. (R)**

Mark graduated in 1993 from City College of San Francisco with an AS degree in diagnostic medical imaging. As head of our X-Ray and MRI Departments for over eight years, Mark is responsible for all of the images taken at The Stone Clinic and consistently obtains high-quality images to aid in the proper diagnosis of our patients. Mark is the proud owner of three Harley Davidson

motorcycles, including a reconditioned Police Cruiser. He recently returned from a pilgrimage to Milwaukee, WI, home of the original Harley factory.



**Elaine Lowell, Office Assistant**

Elaine has lived in San Francisco since 1984.

Before joining The Stone Clinic team, Elaine worked exclusively in the non-profit sector as a community volunteer, development assistant, and special events coordinator. For the last 19 years Elaine and her husband have lived at the Raphael House, serving the needs of homeless families. They have two teenage children.

## Nutrition, Supplement and Diet

We are emphasizing three key areas of nutrition for our patients:

**Glucosamine:** Oral supplementation with glucosamine hydrates the tissues, lubricates the joints, decreases stiffness, inhibits cartilage breakdown, and stimulates cartilage repair.

We recommend everyone take 1500 mg each day. For those without injuries, we believe their joints will be healthier. For those with injuries or arthritis, the pain and stiffness will be less.

**Vitamin C:** 1000 mg daily is necessary for cartilage and collagen formation and repair. This is best obtained by drinking a large glass of fresh squeezed orange or grapefruit juice each day.

**Calcium and Vitamin D:** Everyone, especially women, should get 1200 mg of supplemental calcium each day. Women lose at least 3% of their bone mass each year. The mortality after a hip fracture for osteoporosis is 30% or more in the first year alone. Only resistance exercise combined with calcium, Vitamin D,

and sunlight (to convert the Vitamin D to its active form) can build bone mass without side effects. We emphasize resistance exercise (uphill walking or hiking, weight lifting, etc) seven days a week. Use it or you will definitely lose it each day. Flat walking, swimming and stationary biking is not enough.

**Water:** We are all relatively dehydrated for much of the day and all of the night. The brain cells, muscle cells and bone building machinery all work better in a hydrated state and struggle when dehydrated. We recommend 8 tall glasses of water each day (in addition to whatever other beverages you prefer).

For weight loss, drink two glasses of water before lifting the fork at each meal and two glasses before bed. No eating between meals. This program in combination with one hour of exercise each day, will lead to a one pound per week weight loss for those people who are over weight. We think this is the ideal rate.



*Drink 8 tall glasses of H2O a day.*

## Excerpted from Pacific Graduate School of Psychology Commencement Address

**Kevin R. Stone, M.D.**  
**Saturday, June 14, 2003**

I was told I am being honored here today because of my philanthropic contributions to the community. It is the nicest honor I could receive. I hope that you also receive one someday. My advice on how to do that follows: Philanthropy begins with your motives. I would like to share with you a little bit of mine.

I founded a public, non-profit foundation to research the surgical techniques I had developed, to determine their efficacy, to teach other surgeons the methods, and to teach rehabilitation experts preventive and post-operative care designed to return patients in better condition than they were before they were injured. With the [Stone] Foundation, the scope of my mission to help people with orthopaedic problems goes beyond my patients. I am able to help patients on an individual basis, and this gives me tremendous joy and satisfaction. I am also able to affect a broad population. Since I was going to spend my life improving orthopaedic care, I wanted those improvements to pass the test of outcome studies and then to affect as many lives as possible. The Foundation serves as a vehicle to spread that information and for my patients and donors to give back to and advance the medical science that helped them.

I also give of my time to my patients, charge those that can afford it, and ignore the bills of those who can't. If you only care for those who can afford your services, you will miss the joy and appreciation that comes from

those you help for the pure bliss of it. That bliss is irreplaceable. Bliss is a good motive and reward.

I founded three venture-funded companies that develop products to help people achieve their goals of health and fitness. Working in the for-profit world by designing products that have commercial applicability is one way to fund certain types of research and accomplish specific goals. The work does not have to be tainted. It does need to have a valuable mission that fits your worldview. It also means you have to have a worldview.

So, I am often asked, "How do you do so much; how do you divide your time between full-time practice, research, private companies, family, and sports."

The answer is that I find an enormous amount of time in every second.

Within each second there exists the introduction, action or thought time, and the exit or segue to the next second. As you enter that second, your receptiveness or your aggression determines a lot about the quality of the moment. Attitude and focus are key requirements to use the moment well. When I am focused on important issues and working with a positive attitude, my mind hums, my thoughts are valuable, and my words activating.

When a patient sits before me with an injured knee, they bemoan the injury, the loss of time from work and play, the pain, the fear, and the unknown. They see themselves as a patient about to be in a system

that they dread. Then they wait and look to me for comments. At that moment I can do enormous good or harm. If I can turn their emotions to a positive outlook, I can succeed as their doctor and use our time together for a good cause. In this case, the cause is health, the tools are their expectations and abilities, and the method is my encouragement and skill. If I can get them to see themselves not as a patient in rehab but as an athlete in training, I will succeed in changing the context of their problem and most likely attain the outcome we both want. Philanthropy begins with my placing myself in their space.

I can look them in the eye and say, "Bad luck you have injured your knee. It is fixable. If I can convince you to look at the reasons you were injured, to correct them, to see yourself as an athlete and not a patient, to use my skills and the skill of my rehabilitation team to help you become fitter, faster and stronger than you were before you were injured, then we will have done good. We will have turned a negative experience into a positive one, a tragedy into an opportunity." When I take a patient to surgery with the mind-set that this is the first day of their new lifelong training program, then my seconds of communication turn into a lifelong gift. It only takes a few seconds of entering their space.

My mission is to help people. Every time, every interaction, every second of their attention span is my opportunity to do so. I have an agenda, and I encourage you to have one, too.

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