

Fall 2006

Foundation News

Steadman ♦ Hawkins Research



photo: John Kelly

PATIENTS IN THE NEWS

The Brad Ghent Family: Colorado's First Family of Skiing

By Jim Brown, Ph.D., Executive Editor, *Sports Performance Journal*;
Executive Editor, *UCLA Arthritis Update*

MEMO #1 - TO THE COLORADO CHAMBER OF COMMERCE:

Nominations are now open for the position of "Poster Family" to promote Colorado skiing. The first candidate is the Brad and Karen Ghent family of Vail. Allow us to submit their credentials.

- Brad skied at the collegiate level, coached at Colorado University, then joined the coaching staff of the U.S. Women's Ski Team before becoming a successful businessman in Vail. He owns and operates two businesses at the Eagle County Regional Airport in Vail, including the Dollar Rent a Car agency.
- Karen was a member of the U.S. Ski Team for five years, competed in the World Championships, is a certified United States Ski Association National Coach, and is Alpine Director for the Ski & Snowboard Club in Vail, a huge organization with more than 200 kids and 20 coaches. Among her many responsibilities is coaching 11- and 12-year-old skiers four days a week.

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An International Center for Research and Education—Keeping People Active

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*The Ghent Family:
Brad and Karen;
front, left to right,
Erika, Christa, and
Abby.*

- Their daughters, Erika, Christa, and Abby, are all skiers, though their schedules are packed with other activities. Erika, 18, and Christa, 16, competed at the U.S. Nationals earlier this year.

MEMO #2 - TO THE COLORADO CHAMBER OF COMMERCE:

Don't take our word in support of this amazing, multi-tasking Colorado family. Listen to Charlie Meyers, the eloquent, award-winning Outdoors Editor of *The Denver Post*. "Perhaps it was pure serendipity that two of the finest people associated with the U.S. Ski Team came to be married — or simply the way that good folks manage to find each other. That these two

were connected by the common thread of top-level ski-racing competition serves to complete that bond. Suffice to say that Brad Ghent and Karen Lancaster Ghent have given so much to skisport, both as coach and competitor. They represent the best spirit of connecting through generations of the sport."

MEMO #3 - TO THE COLORADO CHAMBER OF COMMERCE:

Nominations are closed. The Ghents win. They are the unofficial spokespersons for Colorado skiing and may be nominated for another position — "Colorado's First Family of Skiing."

Needless to say, Brad, Karen, and the girls do not endorse this announcement nor do they want the attention. Their lives are moving along quite nicely without these new titles.

BUMPS ALONG THE WAY

The contributions Brad and his family have made to skiing have come at a price. Karen broke her leg in a skiing accident when she was 16. Brad ruptured his ACL and tore a meniscus when he was skiing at CU, and he re-injured it at least one more time later in his skiing career. Christa hit a couple of bumps the wrong way earlier this year at the U.S. National Ski Championships and suffered essentially the same injury

IRA Rollovers Permitted for Charitable Gifts

On August 17, President Bush signed a law containing a welcomed, tax-saving incentive that makes it simple and easy for individuals who want to give to charities from their IRAs to do so without any increase in income taxes.

The Pension Protection Act of 2006 contains a provision that allows a taxable distribution from an individual retirement account (traditional IRAs and Roth IRAs) to be excluded from gross income if that distribution is rolled over directly to a qualified tax-exempt organization.

How Does It Work?

Effective during 2006 and 2007, if you will be 70 years old or older on the date you make the gift, you may make gifts using a source of funds not previously available without difficulty and sometimes penalty — your IRA. Essentially tax-free, gifts up to \$100,000 can now easily be made by simply directing the IRA administrator to transfer funds directly to Steadman♦Hawkins Research Foundation. Because the gift goes directly from your IRA to the Foundation, no income passes to you, hence the distribution is excluded from your gross income. As a result, a gift can be made without incurring taxes! Additionally, transfers that qualify as charitable distributions will satisfy the minimum distribution amount as well.

Which Plans Qualify?

The Act applies to traditional IRAs and Roth IRAs only. Retirement plans that do not qualify include 401(k), 403(b) annuities, defined benefit and contribution plans, profit-sharing plans, Keogh and employer-sponsored SEPs and SIMPLE plans. Donor advised funds and supporting organizations are also excluded.

(torn ACL, torn meniscus) that her dad had experienced as a collegiate skier. By the way, Christa's injury happened exactly 27 years after her mom's broken leg. Same event, same hill (Sugarloaf), same leg, same date — Karen's birthday. This is starting to get spooky.

The common denominator that emerged during the Ghent family's history of sports injuries was Dr. Richard Steadman. He was a young orthopaedic surgeon in Lake Tahoe who mended Karen's broken leg. She hasn't had a problem since. He was already becoming a nationally known surgeon when he "cleaned up" Brad's damaged knee in 1982. Ten years later, Dr. Steadman performed his signature microfracture procedure on Brad. The microfracture approach is now being used by thousands of doctors around the world. Skiing is difficult for Brad, but his knee feels great and he can still bike and fish, two more of his recreational interests. This year, Dr. Steadman first repaired Christa's meniscus and later operated on her torn ACL. She is two months ahead of schedule in her rehabilitation program, anticipates a 100 percent recovery, and expects to be running and skiing by the end of the year. By the way, Christa played youth soccer and, with her older sister, Erika, was a member of last year's state high school championship cross-country team.

INVESTING IN THE FOUNDATION

The experience and friendship the Ghent family has had with Dr. Steadman has brought them into an ever-widening group of people who support the Steadman♦Hawkins Research Foundation. "Anything we have done for the Foundation is also an investment in us," says Brad. "Just look at what the Foundation's research has done for Christa. By tracking thousands of cases and making that data available to a worldwide medical community, and by training scores of young doctors in the Steadman-Hawkins Fellowship Program, the probability of success in treating injuries like hers continues to improve.

"The work of the Foundation gives people like us, as well as those with degenerative arthritis," concludes Brad, "the chance to extend our active lifestyles for many years to come. I urge other families to join us in supporting the Foundation. It will be an investment that will pay solid dividends to themselves and others around the world."

MEMO #4:

There is no Colorado Chamber of Commerce. No "Poster Family." No "First Family of Colorado Skiing." But if there were, . . .



Who Will Benefit From the Act?

Because of the terms of the Act, the following groups will benefit the most:

- Individuals who already give at the 50 percent charitable deduction limit.
- Individuals whose income levels are such that their exemptions are phased out.
- Individuals who do not itemize their deductions.
- Individuals for whom additional income would risk more taxation on Social Security income.

What Are the Details?

There are a number of items to be aware of for the gift to qualify. A few of them are listed below:

- The IRA administrator must transfer the funds directly to the charity.
- The individual must be at least 70 years of age at the date of the gift.
- The gift must occur during the individual's lifetime.
- The organization must be able to accept tax-deductible contributions.
- Qualification under state and local tax laws may differ from the federal tax treatment.

For more information on how you can make such a gift, we first encourage you to consult with a professional whose expertise includes tax law and charitable giving. You may also contact John McMurtry, Vice President for Program Advancement, at 970-479-5781 or john.mcmurtry@shsmf.org.



photo: Barry Merten

RESEARCH UPDATE

Why Do Injury Patterns Differ Between Major League Players and Little Leaguers?

By Michael R. Torry, Ph.D.

[Dr. Torry is the Director of the Biomechanics Research Laboratory at the Steadman•Hawkins Research Foundation.]

There is an alarming national trend among young baseball players. Parents are bringing their children into the sports medicine clinic and inquiring about procedures such as "Tommy John" surgery, and this is unacceptable.

Injuries in younger pitchers are much different from those observed in professional pitchers. This observation led us to believe that the pitching mechanics are also likely to be different. The Biomechanics Research Laboratory has published several papers on the pitching mechanics of Little Leaguers and, in conjunction with our professional pitching database, we were able to compare throwing patterns of developing young pitchers to successful mature pitchers. Although significant differences do exist, there are many more similarities.

COMPARATIVE SPEEDS

Little Leaguers only throw about 50-65 mph fastballs. However, given the shorter

Young players (as early as 13 years old) need to be taught proper techniques.

distance from home plate to the pitcher's mound, this translates into a professional pitch velocity equivalent of 80-95 mph to the batter. Our research has also shown that Little League pitchers actually execute the pitch sequence in a similar manner, with major differences from the pros being partly attributed to height, weight, and physical strength.

Why are the injuries patterns so different? This is likely due to the physical strength and the skeletal maturity of the athletes. As we mature, the tissues become more rigid and able to withstand higher forces. Young players (as early as 13 years old) need to be taught proper techniques. They are already developing pitching mechanics they will carry into adolescence and adulthood. Also, the unique aspects of the developing skeleton make their bodies more susceptible to a variety of injuries not commonly seen in adult pitchers. One such injury is Little League elbow, in which the force applied to the upper arm during the pitch could play a role in these athletes during puberty and in the increase in injuries seen in the throwing arms of professional pitchers. Although these injuries may be due to the musculoskeletal changes occurring during growth, they may also be, at least in part, due to pitching techniques. Since the trunk can be utilized to create enormous power and increased ball speed, it may be that the differences we observed in trunk motions between the youth and professional baseball pitchers also may explain the differences in patterns of injuries between these two groups.

TRUNK ROTATION

The Steadman-Hawkins team investigated the rotation of the trunk during the pitching motion between youth and professional pitchers. The peak rotational velocities of both the upper trunk and pelvis were greater in youth baseball pitchers than in professional pitchers. Youth baseball pitchers

control their trunk motion in a less efficient way than elite pitchers. Peak pelvis rotation velocity occurred near the time of stride foot contact in the professionals, while it occurred much later in the youth pitchers. Proper timing of pelvis and upper trunk rotation are necessary to effectively transfer energy from the trunk to the throwing arm. Therefore, increased trunk rotation speed may be a compensation for improper timing of segment rotations or insufficient muscle strength in youth pitchers. Improper energy transfer from the trunk to the upper extremity may lead to the increased shoulder internal rotation and elbow extension velocities in youth pitchers compared to the professionals.

EASIER TO CORRECT MECHANICS AT A YOUNG AGE

Understanding injury mechanisms in this group is fundamentally important, but what we really want to do is utilize this information to make evidence-based recommendations for youth league coaches about safe pitching techniques and limits — a true grass-roots effort to reduce injuries in these kids. We now believe that many injuries experienced by the professional pitcher may be related to pitch mechanics that are promoted at a young age. And it is much easier to teach correct mechanics to a young pitcher than attempt to retrain a seasoned professional pitcher.



Arthritis Research Yields Breakthrough in Early Detection

By Peter J. Millett, M.D., M.Sc.

Dr. Millett, of the Steadman-Hawkins Clinic has led a team of researchers who have made a pioneering breakthrough in osteoarthritis research by discovering a molecular “fingerprint” for osteoarthritis.

Among the over 100 types of arthritis, osteoarthritis is the most common. The establishment of a “fingerprint,” or biomarker, heralds an important first step in the diagnosis and understanding of this disease that afflicts over 20 million people in the United States alone.

The discovery was made by the Musculoskeletal Proteomics research group at Harvard, which was directed by Dr.



photo: John Kelly

Millett. Proteomics is emerging as a powerful new field of research with enormous potential to influence disease diagnosis and treatment. Proteomics allows for the study of proteins — the active molecules in all biologic systems — and the discovery of the biomarker is only the beginning.

“The breakthroughs we have made in establishing a molecular fingerprint for osteoarthritis are extremely pivotal. With the discovery of this new biomarker, we now have a foundation from which we can identify new protein targets for improved diagnostic tests and for better treatments that will help those afflicted with osteoarthritis,” says Dr. Millett.

The physicians of the Steadman-Hawkins Clinic in Vail are known around the world for innovative approaches to orthopaedic treatment and research. Through the award-winning Steadman-Hawkins Research Foundation, orthopaedic clinics have introduced new surgical techniques and minimally invasive procedures.

Dr. Millett looks forward to future breakthroughs that are sure to follow in proteomics and osteoarthritis, ultimately improving the health of millions affected by the degenerative disease.



Newsletter Articles Now Available in Audio Format

Now you can listen to the latest newsletter stories and articles from the Steadman-Hawkins Research Foundation. Go to the Foundation website (www.shsmf.org), click on Newsletter Audio Files, and follow the instructions. This new audio format can be downloaded to computers, iPods, and media players. Each article will be 5-10 minutes — convenient for listening while you exercise, travel, or work.

Exercisers who train every day, but not necessarily in the mornings, need 5-7 grams of carbohydrate per 2.2 pounds of body weight per day, and they should start replenishing their reserves immediately.

SPORTS & WELLNESS

Short-Term Recovery Nutrition

What you eat or drink to recover following intensive exercise should vary with the amount of time before the next exercise session. In the *Gatorade Sports Science Exchange*, Clyde Williams, Ph.D., provides short-term, time-specific guidelines. He focuses on carbohydrates to restore glycogen and fluids to rehydrate for the short term (2-24 hours).

Exercisers who work out or play twice a day have to recover quickly or risk poor performance. Recovery strategies depend on the specific sport or type of exercise, but whatever the activity, there are three requirements for successful recovery:

- 1 replacing the body's carbohydrate stores
- 2 replacing fluids
- 3 rest

24 HOURS TO RECOVER (MORNING WORKOUTS)

Those who exercise once a day during the mornings have the rest of the day to recover. After a session, they should consume a sports drink that provides the equivalent of one gram of carbohydrate per 2.2 pounds of body weight and drink the same amount every hour until the next meal. Meals for the rest of the day should contain enough carbohydrate to bring the total intake for a 24-hour period to approximately 8-10 g/2.2 pounds. For a 176-pound person, this amounts to 640-800 grams of carbohydrate for 24 hours.

2-4 HOURS TO RECOVER

Recovery periods can be as short as two hours for swimmers, tennis players, and



photo: John Kelly

other athletes. Exercisers can replace a significant amount of glycogen. In those cases, consume 0.8-1.2 grams of carbohydrate per 2.2 pounds per hour at 30-minute intervals. The most effective way to restore muscle glycogen is by consuming sports drinks. The fluid intake should be equivalent to 150 percent of the body weight lost during the previous exercise period, determined by noting weight before and after exercise. Immediately after exercise, fluids are a better choice than solid foods, but food is okay after a cool-down period. Foods should consist of easily digested carbohydrates in low to moderate amounts that won't result in stomach problems.

DAILY TRAINING

Exercisers who train every day, but not necessarily in the mornings, need 5-7 grams of carbohydrate per 2.2 pounds of body weight per day, and they should start replenishing their reserves immediately. To kick-start the process, get 0.8-1.2 grams per 2.2 pounds of body weight per hour. If you begin a training session lighter than the day before and you have not restricted food intake, dehydration is a possibility. Monitoring body weight before and after strenuous exercise is a rough guide to your level of hydration.

[Adapted from the *Gatorade Sports Science Exchange*]



Get Ready for Winter Sports

By Ana Jeronimus, P.T.

[Ana Jeronimus is an outpatient orthopaedic and sports physical therapist at Howard Head Sports Medicine Center in Vail, Colorado.]

Soon we will be waxing our skis, digging out our snowshoes, and hoping that we find ourselves pleasantly surprised with a \$10 bill in our ski jacket (instead of the usual pocketful of sand from an exploded hand warmer). In addition to going through our winter gear inventory, there are many ways we can physically prepare for those powder days.

There is a lot to think about when preparing for winter sports. Cardiovascular fitness, strength, and balance are important components that will help you ward off injury on the slopes and trails.

If you are not on a cardiovascular program, now is the time to start. Begin with an activity you are already comfortable with, such as hiking, biking, rollerblading, swimming, etc. If you are starting from scratch, take it easy. Exercise three to four times a week, and work easily up to 30-45 minutes within 60 percent to 80 percent of your target heart rate to maximize the benefit of exercise.* Consider at least two means of exercise. Cross-training is a great way to keep motivated, to expand your options when training with friends, and to work various muscle groups through multiple planes of motion. Furthermore, when planning the best cardiovascular program for yourself, think about its relationship to your winter sport. For example, consider an endurance program if you plan to be snowshoeing or cross-country skiing. For downhill skiing, incorporate interval training into your routine since you will be skiing in shorter bursts with intermittent rests on the mountain or chairlift.

Strength training is just as important as cardiovascular fitness. Inevitably, we get tired after a full day and need both muscle strength and endurance to combat injuries.

Let's begin with the basics: core strength. The core consists of your abdominal, pelvic, and low back musculature. It is an important training tool because you

build a good foundation for overall strength, control, and power. Begin by learning how to fire your transverse abdominus (TA) muscle. The TA is a deep abdominal muscle that, when activated, will co-contract with your spinal muscles to protect your low back. Simply pull your bellybutton toward your spine to activate your TA. Make sure that you can breathe comfortably during this contraction. If it is difficult to do so, you are pulling in too much. When firing your TA, it is very important that you keep in a "neutral spine" or normal lumbar curve.

Once you are comfortable with contracting your TA and keeping a neutral spine, challenge yourself by maintaining the appropriate position throughout a series of core strengthening exercises. An easy core exercise you can do at home is "bridges." Lie on your back with your feet rested on the floor or on a Theraball, engage your core, find your neutral spine, and slowly raise your hips off the floor. A Theraball is a great way to work on your core strength, but the options are endless.

Now that you know how to develop your core, we can move on to some sport-specific strengthening ideas. First, isolate your quadriceps (thigh muscles) by trying one-third knee bends. Remember to engage your core and maintain neutral spine. As you squat, be sure you can always see your toes, otherwise you are leaning too far forward.

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photo: John Kelly

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One-third knee bends



Side step against resistance



Heel raises



Single-leg balance

Hamstrings: Do the same bridges described earlier to work your core and posterior thigh muscles simultaneously.

Hips: Try placing a small rubber ball between your knees and squeeze your knees together. This works on the inside of your thigh. To work the outside of your thigh place a belt or Theraband around your ankles or knees and pull your knees apart. Challenge yourself further by side-stepping against the resistance of the Theraband, while holding your TA and neutral spine.

Calf muscles: Try heel raises on the floor or over the edge of a stair.

Ankle stabilizers: Any balance activity will activate this group of muscles.

In addition to strengthening the lower leg muscles, balance training is a way to make core strength and overall strength training more functional and sport-specific. This component of fitness teaches your body's muscles to work together as a team to increase joint stability, improve your reflexes, and prevent injury. Start simple with single-leg balance on the floor. Challenge yourself by looking from side to side, closing your eyes, reaching for a target, or playing catch. When you are working on balance and challenging your limits, always keep your ankles, knees, and hips aligned. When you are feeling comfortable with this progression and look to challenge yourself further, progress (carefully!) by standing on an uneven surface (such as a pillow, dynadisc, BOSU ball) and incorporating one-third knee bends or tuck squats.

There are many ways to develop overall cardiovascular endurance, strength, and balance. Consult your physical therapist or athletic trainer for ideas on a program designed best for you. Always check with your physician before beginning a new exercise program.

Winter has finally come and you are on your way to enjoy your favorite winter sport. Don't forget to give yourself time for a proper 10- to 15- minute warm-up before exercise and a 10-15 cool-down as you finish. Whenever I went skiing, my grandmother always said, "Remember! You always get hurt on the last run." Now that I work as a physical therapist, my patients'

injuries have helped illustrate the wisdom of my grandmother's words. If you lose your focus or push yourself beyond exhaustion just to take that extra loop on the trail or one more trip up the lift, you are setting yourself up for injury.

You can't avoid all injuries. Sometimes you may take every precaution and still fall. But you'd be amazed at how much better you will feel and perform with a little preparation. Have a great winter season. See you on the slopes and trails!

* Age-predicted maximum heart rate: $220 - \text{age} \times .6 - .8$. Check your pulse throughout exercise to indicate whether you fall within your target heart rate.



HEALTH MATTERS

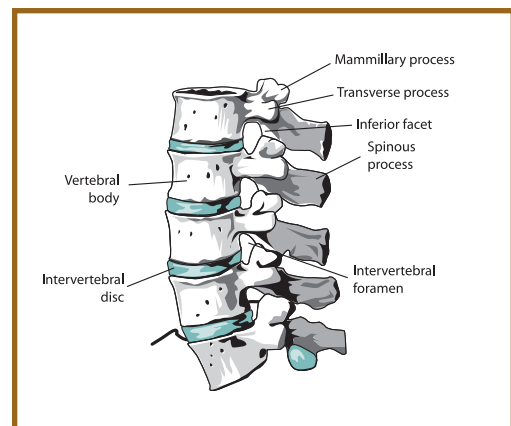
Treating Chronic Back Pain

By David C. Karli, M.D.

[Dr. Karli is a spinal physical medicine and rehabilitation specialist at the Steadman-Hawkins Clinic.]

Many of us suffer from chronic back pain. If that pertains to you, chances are you've been referred to physical therapy or told to start an exercise program. I certainly recommend exercise and strengthening to all of my patients with spine-related problems. Patients often ask me why we use exercise as treatment. I want to review the basic reasoning for this recommendation and discuss physician expectations when exercise is prescribed.

Over a lifetime, our spines gradually degenerate. This leads to chronic pain for



Lumbar spine

illustration: Marty Bee

many. On some level, we will all develop degenerative spinal changes. This process is in part determined by genetics as well as daily wear and tear. One of the key factors driving this process is a lack of blood flow inside the actual discs of our spine. Discs rely on nutrients from the vertebrae immediately adjacent to them. Nutrients are pulled from the blood supply of the vertebrae to nourish the cells inside the discs. These cells keep our discs healthy and functioning normally. Anything that compromises blood flow inside the vertebrae in turn contributes to premature disc cell death. As these cells die from a lack of nutrition, our discs are more susceptible to degeneration and injury.

With this knowledge, it would make sense to engage in any activity that would promote blood flow into the vertebrae and nutrition into the discs. At this point, the limits of modern medicine prevent us from growing new blood vessels to serve this purpose. We are left with treatment that improves the existing blood supply. Maintaining overall health and fitness is the single best way to maintain this blood flow. A healthy heart pumps blood more efficiently. A lean body with good muscle mass maintains blood flow to tissues outside the heart. Healthy diet and exercise maintain lean body mass and lower cholesterol. Refraining from smoking and controlling diseases like high blood pressure and diabetes are critical because these problems lead to weaker blood flow throughout the body.

Often, specific spinal exercises are prescribed. We refer to these programs as "core stabilization." They often involve Pilates, yoga, floor/mat exercise, physioball, machines, and sometimes, free weights. The goal is to improve spinal flexibility and strengthen the muscles that move and support our spines. This, of course, does not cure degenerative discs. In fact, the exercises have no direct effect on the discs. The way they reduce pain is by preventing weakness, stiffness, and muscle spasm/tension that often accompany internal disc problems. Preventing or reversing these secondary problems is vital to minimize pain and maintain an active lifestyle.



photo: John Kelly

Welcome 2006-07 Fellows Six New Physicians Introduced

Six new members of the incoming "class" of Steadman-Hawkins Fellows have had a busy schedule refining their skills as they make final preparations for a career as orthopaedic surgeons. Regarded as one of the most prominent and rigorous academic fellowship programs in orthopaedic sports medicine, six new orthopaedic surgeons are selected from a pool of more than 100 applicants.

Steadman-Hawkins Fellows spend their year refining skills and learning new surgical techniques and they have an opportunity to participate in research with Foundation scientists. Each Fellow will be actively involved in Clinical, Basic Science and Biomechanics, and Rehabilitation research.

The stream of knowledge and information flows both ways. The Fellows, having completed their formal training in leading orthopaedic programs, share knowledge they have gained from years of training elsewhere with the physicians and scientists of the Foundation.

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Where are they now?

Members of the graduating class of 2005/2006 Steadman-Hawkins Fellows are busy establishing new careers in orthopaedics.

Mark Adickes, M.D., has joined the medical staff at the Roger Clemens Institute for Sports Medicine and Human Performance in Houston, Texas.

Dominic Carreira, M.D., is completing foot and ankle fellowships with Dr. Pierce Scranton in Kirkland, Washington, and Dr. Mark Myerson in Maryland. Ultimately, he will reside in Fort Lauderdale, Florida, where he will practice as a foot, ankle, and hip arthroscopy specialist providing orthopaedic services for high schools in Broward County and professional teams.

A. Martin Clark, M.D., has moved to the Phoenix area, where he is working as a sports medicine specialist in a growing group called The Core Institute.

Stephen A. Hunt, M.D., has joined a private practice in Bedminster, New Jersey.

Todd L. Johnston, M.D., proudly joins his father in a busy practice at Cedar Valley Medical Specialist in Waterloo, Iowa. He is excited to have the opportunity to make an impact on the community in which he grew up.

Scott W. Kimmerly, M.D., chose to stay in Colorado. Dr. Kimmerly accepted a full-time position at Steadman-Hawkins Clinic in Summit County, Colorado.

2006-07 STEADMAN-HAWKINS FELLOWS

Dr. Brett Cascio was born and raised in New Orleans, Louisiana. He attended Duke University, where he majored in history and biology and played club football and baseball. He graduated with honors from Louisiana State University Medical School in New Orleans, where he was president of Alpha Omega Alpha. Dr. Cascio completed his orthopaedic surgery residency at The Johns Hopkins Hospital, where he was named Administrative Chief Resident. Dr. Cascio is a captain in the U.S. Army Reserves. His two main areas of research are cartilage regeneration and the medicolegal aspects of compartment syndrome. Dr. Cascio has presented his research at several national meetings, including the American Academy of Orthopaedic Surgeons and the International Cartilage Repair Society, and has published his work in journals such as the *Journal of Bone and Joint Surgery* and *Clinical Orthopaedics and Related Research*.

Dr. Michael Huang graduated summa cum laude with an undergraduate degree in neuroscience from the University of Pennsylvania. He attended medical school at Washington University School of Medicine in St. Louis. His orthopaedic surgery residency was completed at the University of Iowa Hospitals and Clinics. He was involved with the Cedar Rapids Roughriders hockey team, helping them win the United States Hockey League's Clark Cup championship in 2005. His research experience includes evaluation of the role of angiogenesis in osteochondral healing. He is published in journals such as *Spine*, *Journal of Pediatric Orthopaedics*, and the *Iowa Orthopaedic Journal*.

Dr. Benjamin Huffard graduated from Lehigh University in Bethlehem, Pennsylvania, with a bachelor of science degree in civil engineering. He attended Yale University for the post-baccalaureate Premedical Program from 1995 to 1996. Following his premedical training, Dr. Huffard attended medical school at Yale University School of Medicine, graduating with his M.D. in 2001. Dr. Huffard completed an internship in General Surgery at the New York Hospital in 2002 and his orthopaedic surgery residency was completed at the Hospital for Special Surgery. Dr.

Huffard's current research is "A Comparison of Achilles Tendon Repair Strength Using the Krackow Suture with the Achillon7 Tendon Repair System: An Anatomic in Vitro Biomechanical Study." Additionally, Dr. Huffard spent time as a research assistant at the Young-Penny Lab in Boston, Massachusetts, from 1996 to 1997. He is published in *Foot and Ankle International* and has made presentations at the American Pediatric Society for Pediatric Research, the Society for Neuroscience, and the World Federation of Neurology Research Group on Huntington's disease.

Dr. David King graduated from the University of Virginia, where he was an interdisciplinary major in neuroscience. He then obtained a medical degree from Emory University and completed his residency in orthopaedic surgery at Washington University in St. Louis. During his training, Dr. King's research was published in *The Journal of Bone and Joint Surgery*, *Seminars in Arthroplasty*, and *Techniques in Sports Medicine*. Dr. King was the recipient of the Leonard Marmor Foundation Award for outstanding resident research for his paper on femoral deformity in tibia vara. His other areas of interest include biologic resurfacing in glenohumeral arthroplasty and meniscal repair devices.

Dr. Colin Looney graduated magna cum laude from Washington and Lee University with a bachelor of science degree in biology. He was a member of the Phi Beta Kappa Honor Society. He completed his Doctorate of Medicine in 2001 from Duke University School of Medicine, graduating as a member of the Alpha Omega Alpha Honor Society. He finished his orthopaedic surgery residency at the Duke University Medical Center in Durham, North Carolina. Dr. Looney served as the resident team physician for the Duke University basketball and football teams and has also served as the resident physician for North Carolina Central University. He has been published in numerous journals, has presented at several meetings, and has been active in research.

Dr. Yi-Meng (Beng) Yen graduated cum laude from the University of California, Los Angeles, with degrees in chemical engineering and economics. He completed his master of science degree in engineering before starting in the Medical Scientist Training Program at the University of California, Los



Dr. Peter J. Millett, J. Richard Steadman, William I. Sterett, and Mark J. Philippon with 2006/2007 Fellows. Front, left to right: Thomas B. Viehe, M.D.; David J. King, M.D.; Brett M. Cascio, M.D.; Yi-Meng Yen, MD.; Michael J. Huang, M.D.; Benjamin H. Huffard, M.D.; and Colin G. Looney, M.D.

Angeles. He completed his Ph.D. in biological chemistry and was named Alpha Omega Alpha during medical school. He finished his orthopaedic residency training at the University of California, Los Angeles. He has been published in numerous journals and received awards for both basic and clinical science. Once he completes his fellowship at Vail, he will start a Pediatric Orthopaedic Fellowship at Boston Children's Hospital.

Dr. Thomas Viehe hails originally from Newport Beach, California. In 1995, he graduated with distinction in all subjects with his bachelor of arts degree in history from Cornell University. In 2001, Dr. Viehe graduated from the Medical College of Wisconsin. During his tenure, he served as the Student Body President from 1999 to 2000. Dr. Viehe comes to Vail after having completed his orthopaedic residency training at Emory University in Atlanta. Once he completes his fellowship at Vail, he will start a Foot and Ankle Fellowship with Dr.

Roger Mann in Oakland, California. Dr. Viehe has been active in research, with several projects studying femur fractures, which have been presented at the American Academy of Orthopaedic Surgeons annual meeting, the Orthopaedic Trauma Association annual meeting, the Southern Orthopaedic Association annual meeting, and the Georgia Orthopaedic Society annual meeting. Additionally he has been part of a spine infection research project presented at the American Academy of Orthopaedic Surgeons annual meeting, the North American Spine Society annual meeting, the Southern Orthopaedic Association annual meeting, and the Georgia Orthopaedic Society annual meeting. Dr. Viehe has also published a paper in *Arthroscopy* on the effects of electrocauterization in the arthroscopic management of chondromalacia of the knee.



Thank you

A special "thank you" to our sponsors who make the Fellowship Program possible. We'd like to recognize those individuals and foundations that support the entire Fellowship class through the sponsorship of Academic Chairs.

Chair sponsors of the 2006/2007 Steadman-Hawkins Fellowship Class are **Mr. and Mrs. Harold Anderson, Mr. and Mrs. Lawrence Flinn, The Gustafson Foundation, Mr. and Mrs. Roy Igersheim, Mr. and Mrs. Jay Jordan, Mr. and Mrs. Peter Kellogg, Mr. and Mrs. Al Perkins, and Mr. and Mrs. Steven Read.**

Fellowship Benefactors fund the research of one Fellow for one year. Each benefactor is assigned a Fellow, who provides written reports and updates of his or her work. We extend our gratitude to the following individuals for their generous support: **Mr. Milledge Hart, the Fred and Elli Iselin Foundation, Mr. and Mrs. John W. Jordan, Mr. and Mrs. S. Robert Levine, Mr. and Mrs. Kent Logan, Mr. Tim McAdam, Mr. and Mrs. Jay Precourt, and Mr. and Mrs. Stewart Turley.**

STEADMAN-HAWKINS UPDATE

Board of Directors in the News

CONGRATULATIONS TO DR. J. RICHARD STEADMAN AND EARL GRAVES.

Bay Area Knee Society Honors Dr. Steadman with Lifetime Achievement Award

The Bay Area Knee Society, a San Francisco-based organization, will present its annual "Lifetime Achievement Award" to Dr. Richard Steadman. The presentation will be made Thursday evening, November 16.

"Every year we present our Lifetime Achievement Award to that individual who we believe has made a substantial contribution to advancing the art and science of knee surgery," commented Dr. Scott Dye, president of the Bay Area Knee Society. "We see it as equivalent to the Nobel Prize of the knee." Past recipients have included Jack Hughston, Werner Muller, John Feagin, John Insall, Dale Daniel, and Mark Coventry, among others.

The Bay Area Knee Society is composed of more than 100 orthopaedic surgeons who have an academic and clinical interest in the knee.

Foundation Trustee and *Black Enterprise* Magazine Founder Earl Graves' Life and Career Featured in *The HistoryMakers'* PBS-TV Interview Series

On Saturday, October 28, 2006, the life and career of renowned publisher and business leader Earl Graves was featured during *The HistoryMakers* PBS-TV taping, *An Evening with Earl Graves*. The program was taped before a live audience of 1,000 people at Chicago's Goodman Theatre. Julian Bond, civil rights activist and politician, conducted the interview. Earl Graves serves on the board of the Steadman•Hawkins Research Foundation and co-chairs the Development Committee.

Business mogul and publisher of *Black Enterprise*, Earl Graves has done more to revolutionize the landscape of the African-American business community than anyone in the United States. Following a brief career as a real estate agent, Graves spent three years working with Senator Robert F. Kennedy. In the early 1970s, as African Americans' opportunities in corporate America began to expand, Graves decided to start a newsletter. This idea for a newsletter quickly grew into *Black Enterprise* magazine. Since the founding of the



photo: John Kelly

magazine in 1970, Graves has helped foster the growth of a vibrant African-American business community.

An Evening with... is the hallmark celebrity interview program and fundraising event of *The HistoryMakers*. Previous programs include *An Evening with Harry Belafonte*, *An Evening with Ossie Davis & Ruby Dee* (Chicago, 2002), *An Evening with Diahann Carroll* (Washington, D.C., 2005), *An Evening with Della Reese* (Atlanta, 2004), and more recently, *An Evening with Colin Powell* (Washington, D.C., 2006), and *An Evening with Andrew Young*, interviewed by Charlayne Hunter-Gault (Atlanta, 2006).

Publications, Presentations and Research



photo: John Kelly

Clinical Research Team: Back row, left to right: Karen Briggs, MBA, MPH; and David Kuppersmith. Front row, left to right: Lauren Matheny, Anna Fey, Marilee Horan, and Mara Schenker.

Karen Briggs, M.B.A., M.P.H., reports that the Foundation has had another very productive spring and summer with numerous papers being accepted by prestigious medical and scientific societies and journals.

The 74th Annual Meeting of the **American Academy of Orthopaedic Surgeons**, San Diego, February 14-18, 2007, has accepted five hip and four knee abstracts. This represents the highest number of presentations the Foundation has had accepted by the Academy.

The Academy provides education and practice management services for orthopaedic surgeons and allied health professionals. The Academy also serves as an advocate for improved patient care and informs the public about the science of orthopaedics. Founded as a not-for-profit organization in 1933, the Academy has grown from a small organization serving less than 500 members to the world's largest medical association of musculoskeletal specialists. The Academy now serves about 24,000 members internationally.



photo: Sarah J. Glover

The Foundation will also be well represented at the **International Society of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine (ISAKOS) Sixth Biennial Congress**, May 27-31, 2007, in Florence, Italy, with the acceptance of four hip and four knee presentations.

ISAKOS advances the worldwide exchange and dissemination of education, research, and patient care in arthroscopy, knee surgery, and orthopaedic sports medicine.

Dr. Peter J. Millett Launches Rocky Mountain Shoulder and Elbow Society



The Inaugural Meeting of the Rocky Mountain Shoulder and Elbow Society was held in Vail, Colorado, June 16-18. The meeting was initiated by **Dr. Peter J. Millett**, associate surgeon at the Steadman-Hawkins Clinic in Vail, and coordinated

by **Greta Campanale**, the Foundation's education coordinator. The conference included formal academic sessions that focused on presentations from experts in the field, including medical research, treatment protocols, and individual surgical technique refinements. The three-day program focused on the continuing advancements within the subspecialty of sports medicine and orthopaedic surgery with a special focus on the upper extremity.

Founded in 2006 by Dr. Millett, the Rocky Mountain Shoulder and Elbow Society is an educational organization dedicated to the elevation of shoulder and elbow care among orthopaedic surgeons in the Rocky Mountain Region. From his prior experience as a founding member of the New England Shoulder and Elbow Society, he has seen the benefit of such a regional organization and wanted to develop a similar program for our region.

The goal of this meeting was to serve as a venue for dissemination of new ideas in shoulder and elbow surgery and for collegiality among orthopaedic surgeons from the Rocky Mountain Region. There are plans for a 2007 meeting of the Rocky Mountain Shoulder and Elbow Society to take place in Taos, New Mexico, hosted by Dr. Dan Guttman of the Taos Orthopaedic Institute.



MEET OUR STAFF

Greta Campanale

Greta Campanale joined the Steadman-Hawkins Research Foundation in September of 2000 as Educational Program Coordinator and has remained in that role ever since.



Her main responsibility is to organize the Steadman-Hawkins Fellowship Program, in which six orthopaedic surgeons spend one year under the tutelage of the physicians in the Steadman-Hawkins Clinic, refining their surgical and clinical skills in sports medicine and contributing to the research of the Foundation. Greta also plans educational conferences hosted by the Foundation, such as the Vail Cartilage Symposium and the Steadman-Hawkins Fellows Meeting, as well as the weekly and monthly academic lectures presented by our physicians and guest lecturers.

Born and raised a faculty child at The Taft School, a prep school in Connecticut, Greta attended Taft and then earned her bachelor's degree in English at Georgetown University in Washington, D.C. While performing a post-baccalaureate pre-med program in Bryn Mawr, Pennsylvania, Greta met her husband Mike, a Philadelphia native, and decided to pursue a path other than medicine. The couple happily transplanted themselves to Colorado, where Mike had lived and gone to college, to new jobs and married life. Although they assured their East Coast families that they would return upon having children, Greta and Mike find that their roots have grown deeply in Vail since Sofia, 3, and Stella, 2, were born. For the foreseeable future, their families have a beautiful Rocky Mountain destination when visiting Greta, Mike, and the girls.



FREQUENTLY ASKED QUESTIONS

CAN I DESIGNATE A CONTRIBUTION TO A SPECIFIC DEPARTMENT OR PROJECT OF THE FOUNDATION?

You may restrict a gift for a specific research department or project, or you may specify "greatest need."

WHAT ARE SOME OF THE RESEARCH PROJECTS CURRENTLY BEING CONDUCTED BY THE FOUNDATION?

The *Clinical and Mechanical Validation of Scar Tissue Removal in the Knee Joint* is a major research undertaking. This study will advance the physician's understanding of the restoration of knee function after surgical removal of scar tissue.

The potential impact of this investigation is significant, as it has the potential to improve the quality of life of millions of individuals throughout the world. The overall goal of the research is to reduce the pain and increase the mobility for patients who experience knee pain that is often observed in patients with chronic osteoarthritis.

Another study conducted by the Foundation is to determine the expectations of treatment in patients with osteoarthritis. Osteoarthritis has recently been listed as one of the top-10 most costly conditions in the United States, with an estimated annual cost of \$16 billion and affecting more than 16 million adults. We are looking at what patients expect from their treatment. Do they want to run a

mile, or just be able to walk up the stairs? Many factors are related to expectations. Based on this research, we hope to help define what patients expect from their treatments and what factors are related to differences in expectations.

If physicians knew what patients expected from their treatment, they could develop new procedures or choose an existing procedure that would help patients meet their goals. This would lead to higher patient satisfaction and improved health-care for patients.

WHAT PERCENTAGE OF FOUNDATION FUNDS COME FROM INDIVIDUAL CONTRIBUTORS AS OPPOSED TO PRIVATE GRANTS?

In 2005, total revenues were \$2.89 million. Of this total, approximately 18 percent came from corporate sponsors, 42 percent from public donations, 27 percent from grants, and 12 percent from special events.

ARE THERE SPECIFIED LEVELS OF GIFT-GIVING, OR CAN A PERSON GIVE ANY AMOUNT, REGARDLESS OF SIZE?

Any amount is always appreciated. Gifts of \$50 to \$1,000 purchase needed supplies and computer software; \$10,000-\$50,000 supports one major scientific project for the year; \$25,000 funds one Fellowship Chair for one year.

**Save the Dates:****THE BEAVER CREEK SNOWSHOE ADVENTURE SERIES PRESENTED BY PEPSI**

Now in its eighth year, this family-oriented snowshoe event attracts everyone from the first-time snowshoer to the world's premier snowshoe athletes. Foundation special events benefit the research and education programs of the Steadman♦Hawkins Research Foundation. In 2005, 32 states and four countries were represented in the series. The series is the largest of its kind in North America and will consist of four events throughout the 2006-07 winter season — Sunday, December 10, 2006; January 7, 2007; February 11, 2007; and March 3, 2007. The adventure series features 5- and 10-K races, walks and runs, slope-side sponsor expos, and post-event plaza parties.



photo: John Kelly



Pepsi Advisory Board member Ray Robinson playing at Sanctuary.

The North American Snowshoe Championships, the final event in the series, wraps up the season with the highest profile event in the sport.

2007 STEADMAN-HAWKINS WINTER WINEMAKER DINNER

The fourth annual Steadman-Hawkins Winter Winemaker Dinner, Sunday, January 14, 2007, will bring together two of the world's finest vintners, Daniel and Florence Cathiard, and one of the world's great chefs, Thomas Salamunovich.

During this elegant evening, Daniel and Florence Cathiard, owners of Château Smith Haut-Lafitte Vineyards, will present their award-winning wines while guests will enjoy mingling with the Cathiards. In the meantime, renowned Larkspur chef Salamunovich will create a specially designed menu to complement the featured wines.

In its first three years of existence, this high-end event has been oversubscribed and has attracted some of the world's finest wines and winemakers from Bordeaux, Napa, and Sonoma.

Reservations for this event are being taken now at the Steadman-Hawkins Research Foundation's Development office (970) 479-5809 or (970) 479-5788.

STEADMAN-HAWKINS SANCTUARY GOLF TOURNAMENT SET FOR AUGUST 16, 2007

The Steadman-Hawkins Research Foundation is pleased to announce the *Pepsi 2007 Steadman-Hawkins Golf Classic*, presented by RE/MAX International at the Sanctuary Golf Course, a premier golf resort located south of Denver near Sedalia. Proceeds from the fourth annual tournament will support the development of new procedures and methodology to battle degenerative arthritis. The team event will include a shotgun start with a modified scramble. The tournament is open to the public and has previously included invitees from the Denver Broncos, local celebrities, and Colorado golf pros. Sanctuary organizes and hosts charitable events to support organizations devoted to the arts, children, health care, and crisis management. To date, more than 161 charities have raised more than 28 million dollars to benefit the constituents they serve.

Renowned course architect Jim Engh, *Golf Digest's* first-ever "Architect of the Year" in 2003, designed the course that protects a private oasis of 220 acres, effectively complementing the 40,000 surrounding acres of dedicated open space.

Golf Digest listed Sanctuary as the best new private course in 1997. Gary McCord, CBS golf analyst and senior PGA tour professional, has said, "Sanctuary is simply the most spectacular golf course I have ever seen."

The Steadman-Hawkins Research Foundation is grateful to Dave and Gail Liniger, owners and co-founders of RE/MAX International, who created this unique opportunity for the Foundation to develop and enhance relationships with those who support our mission.

Sponsorship opportunities and team slots are available now. More information can be obtained by visiting our website (shsmf.org) under "Upcoming Events," or by calling the Development office at (970) 479-5809 or (970) 479-5788.

To request an invitation, or for more information on the above-listed or other upcoming Foundation events, please contact Rachele Palmer at the Steadman-Hawkins Research Foundation (970-479-5809).



Habervision is Here!

Winter is fast approaching and the Steadman-Hawkins Research Foundation would like to offer all our supporters and their families and friends the opportunity to purchase the new and exciting line of Habervision Polarized Eyewear products and accessories at a 50 percent savings! A portion of the proceeds from each sale goes to the Foundation.

The sunglasses and ski goggles incorporate the very best polarized technology available. There is something for everyone. Go to www.habervision.com and enter Affinity Member Code: FOUNDATION, or click on the link below. There is no expiration date. Share the code! Shop and enjoy.

Click on the Habervision link now and save 50 percent on all Habervision Polarized Eyewear and Accessories while supporting the research that benefits all of us.

<http://www.habervision.com/CodeResult.aspx?code=FOUNDATION>

The Steadman♦Hawkins Research Foundation is dedicated to keeping people of all ages physically active through orthopaedic research and education in the areas of arthritis, healing, rehabilitation and injury prevention.

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Ted O'Leary
Research Intern

EDUCATION

Greta Campanale
Coordinator

Ashley King
Educational/Development Program Assistant

TECHNICAL RESOURCES VISUAL SERVICES

Joe Kania
Coordinator

Mark Your Calendar:

DECEMBER 7-9, 2006

Thirteenth Annual Steadman♦Hawkins Research Foundation Fellows Meeting

For more information, contact Greta Campanale at (970) 479-5782, greta.campanale@shsmf.org

DECEMBER 10, 2006

The Beaver Creek Snowshoe Adventure Series Presented by Pepsi

This family-oriented snowshoe event attracts everyone from the first-time snowshoer to the world's premier snowshoe athletes. The series will consist of four events throughout the 2006-07 winter season — December 10, 2006; January 7, 2007; February 11, 2007; and March 3, 2007.

JANUARY 14

Fourth Annual Winter Winemaker Dinner featuring the wines of Château Smith Haut-Lafitte.

For more information, contact Rachele Palmer at (970) 479-5809, rachele.palmer@shsmf.org

AUGUST 16

Pepsi 2007 Steadman-Hawkins Golf Classic Presented by RE/MAX International at Sanctuary in Sedalia, Colorado

For more information, contact Rachele Palmer at (970) 479-5809, rachele.palmer@shsmf.org

To request an invitation, or for more information on Foundation events, please contact Rachele Palmer at the Steadman♦Hawkins Research Foundation (970-479-5809).

Your Legacy, Our Future. Please remember Steadman♦Hawkins Research Foundation in your will, trust, or other estate plan.



Steadman♦Hawkins
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