S U M M E R 2 0 1 2

Arthritis & Joint Insight

A publication by Dr. Robert L. Lock, II

Nuisance Symptoms of a New Knee

Clicks, Numbness, Kneeling & Bending

First performed in 1968, knee replacement surgery is a safe and effective procedure to relieve pain, correct leg deformity, and help restore quality of life. Improvements in surgical materials, technology and operative techniques have greatly increased its effectiveness and have allowed patients to return to activities of daily living at a faster rate. Total knee replacements are one of the most successful procedures in all of medicine with an estimated 600,000 performed annually according to the Agency for Healthcare Research & Quality.

A knee replacement might be more accurately termed a knee "resurfacing" because only the surface of the bones are actually replaced. There are four basic steps to a knee replacement procedure: Preparing the bone, positioning the implants, resurfacing the kneecap and inserting the plastic spacer.

Complications after knee replacement are low with serious complications occurring in less than 2% of patients. Major complications after knee replacement are infection, blood clots, early implant failure, persistent pain, and vascular injury.

Expectations and realities

Numbness around the incisional area, implant “noise” and clicking, and pain with kneeling are considered minor issues after knee replacement in the orthopedic surgery community. These nuisances, however, are sometimes hinderances to patient satisfaction for those who have high expectations for near perfect outcomes after knee replacement.

The goal of knee replacement is ultimately pain control and more than 90% of patients report reduction in pain and an improved quality of life. Improvement of knee motion is a goal of total knee replacement, but restoring full motion is not common. The motion of your knee replacement after surgery can be predicted by the range of motion you have in your knee before surgery. Most patients can expect to be able to almost fully straighten the replaced knee and to bend the knee sufficiently to climb stairs and get in and out of a car. Kneeling is sometimes uncomfortable, but it is not harmful.

Most patients feel some numbness in the skin around the incision. This is caused by the disruption of tiny skin nerves during the surgery. Surgical site numbness does not affect the outcome of knee replacement, and occurs in 100% of knee replacement recipients.

Most patients also feel or hear some noise or clicking of the metal and plastic with knee bending or walking. This is an expected outcome of knee replacement that can be attributed to the prosthetic implant design. Over the years, technology has allowed engineers to design a prothesis that is more durable, thereby creating an implant that will last longer. Implant noise, however, is the trade off for patients. Noise and numbness may diminish with time and most patients find them to be tolerable when compared with the pain and limited function they experienced prior to surgery.

These nuisance symptoms often receive little attention while one is preparing to undergo knee replacement surgery. Patients, family members and healthcare providers are more immediately concerned with major post operative issues and complications such as infection and blood clots. However, patients and family members often have concerns post operatively when these expected outcomes after knee replacement occur. A full understanding of outcomes, expectations and the realities of life with a new knee should be fully explored with your surgeon.

A Message from Dr. Lock

Welcome to another edition of *Arthritis & Joint Insight*. Over the past several months, I have been invited to speak at national orthopedic meetings with regards to computer assisted hip replacement. During these engagements I have been pleased to share the state of the art surgical procedures and technology that is being utilized here in the tri-state area. Edmund and I continue to work alongside our local anesthesia community to bring our patients the latest in pain management control both pre, intra, and post operatively.

In light of the recent ruling on federal healthcare legislation, many patients have asked whether I will be continuing to accept Medicare. For the time being I am continuing to accept Medicare, however, many problems in the current legislation and Medicare continue to cause concern amongst physicians. I would encourage you to contact your congressional representatives to advocate for a permanent fix for the Sustainable Growth Rate, meaningful tort reform to reduce medical costs, and to find long term legislative solutions that actually benefit ALL patients.

Please enjoy our latest newsletter~

Robert L Lock, II, DO, FAOAO

www.arizonajointreplacement.com

Inquiries: Please send correspondence to our Bullhead City office location or call 928-758-1175 to speak with a representative from Tri-State Orthopedics. Patients interested in appearing in "Tell your Story" should email drrobertlock@yahoo.com or call 928-234-5773 for more details.

Obesity in Women possible link to developing Rheumatoid Arthritis

A new study suggests that severe weight gain might raise the risk for rheumatoid arthritis. The epidemiological research conducted from 1985 to 2007 at the Mayo Clinic and recently published in *Arthritis Care & Research*, indicated that about half of the increase in rheumatoid arthritis cases in one Minnesota county may be linked to rising obesity rates there over three decades.

In rheumatoid arthritis, the immune system attacks tissues, inflaming joints and sometimes also affecting other organs and causing fever and fatigue. Rheumatoid arthritis tends to initially impact the hands and feet and then spread to the knees, ankles, hips and shoulders. It is more common in women than in men and affects about 1.3 million Americans. Complications can include heart problems, lung disease, osteoporosis and carpal tunnel syndrome.

To examine a potential link with obesity, researchers pulled medical records covering 1980-2007 from the Rochester Epidemiology Project and studied 813 adults with rheumatoid arthritis and 813 adults as the control group, matched by age, gender and calendar year. Height, weight and smoking status also were noted; roughly 30 percent of the patients in each group were obese and 68 percent were women.

Rheumatoid arthritis cases rose by 9.2 per 100,000 women from 1985-2007, the study found. Obesity accounted for 52 percent of the increase.

The research suggested that obesity precedes the onset of rheumatoid arthritis. The impact of obesity on rheumatoid arthritis risk appeared greater for women in the study, which may be due to the fact that women get the disease three times more often than men.
The illness is influenced by both genetics and environmental factors. Researchers believe that obesity confers a greater risk of inflammatory disease because certain chemicals in fat cells promote inflammation in the body.

Source: Crowson, Davis & Gabriel (2012) Obesity fuels rise in RA, Mayo Clinic News.

With a Cherry On Top

New Research suggests Tart Cherries may be beneficial as an anti-inflammatory super-food

Tart cherries may help reduce chronic inflammation, especially for the millions of Americans suffering from debilitating joint pain and arthritis, according to new research from Oregon Health & Science University presented recently at the American College of Sports Medicine Conference (ACSM) in San Francisco. In fact, the researchers suggest tart cherries have the "highest anti-inflammatory content of any food" and can help people with osteoarthritis manage their disease.

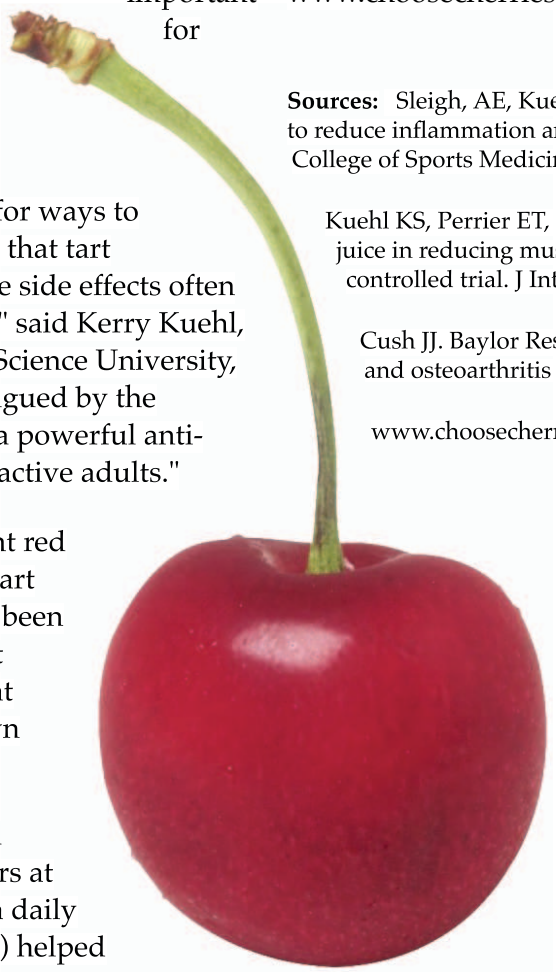
In a study of twenty women ages 40 to 70 with inflammatory osteoarthritis, the researchers found that drinking tart cherry juice twice daily for three weeks led to significant reductions in inflammation markers – especially important for women who had the highest inflammation levels at the start of the study.

"With millions of Americans looking for ways to naturally manage pain, it's promising that tart cherries can help, without the possible side effects often associated with arthritis medications," said Kerry Kuehl, M.D, Dr.PH., M.S., Oregon Health & Science University, principal study investigator. "I'm intrigued by the potential for a real food to offer such a powerful anti-inflammatory benefit – especially for active adults."

Along with providing the fruit's bright red color, the antioxidant compounds in tart cherries – called anthocyanins – have been specifically linked to high antioxidant capacity and reduced inflammation, at levels comparable to some well-known pain medications.

Previous research on tart cherries and osteoarthritis conducted by researchers at Baylor Research Institute found that a daily dose of tart cherries (as cherry extract) helped reduce osteoarthritis pain by more than 20 percent for the majority of men and women. And the same compounds linked to cherries' arthritis benefits have now shown promise for athletes and active adults who are trying to manage the aches and pains of physical activity as they age. The latest science linking cherries to powerful anti-inflammatory benefits shows that drinking tart cherry juice may help runners recover more quickly and effectively from post-race pain.

Available every day of the year in dried, frozen and juice forms, tart cherries are a versatile ingredient to include in any inflammation-fighting diet. To learn more log on to www.choosecherries.com for recipes and information.



Sources: Sleigh, AE, Kuehl KS, Elliot DL . Efficacy of tart cherry juice to reduce inflammation among patients with osteoarthritis. American College of Sports Medicine Annual Meeting. May 30, 2012.

Kuehl KS, Perrier ET, Elliot DL, Chestnutt J. Efficacy of tart cherry juice in reducing muscle pain during running: a randomized controlled trial. J Int Soc Sports Nutr 2010;7:17-22.

Cush JJ. Baylor Research Institute, pilot study on tart cherry and osteoarthritis of the knees, 2007.

www.choosecherries.com

Tri-State Area Counties rank poorly in Health Statistics Data

	Mohave County, AZ	Clark County, NV	San Bernardino County, CA	National Benchmark
Premature Death	10374	7941	7346	5466
Poor or Fair Health	20%	18%	20%	10%
Adult Smoking	28%	23%	17%	14%
Obesity	27%	26%	28%	25%
Physical Inactivity	30%	25%	21%	21%
Excessive Drinking	19%	19%	16%	8%
Preventable Hospital Stays	67	61	65	49
Patients to Primary Physician Ratio	1811 : 1	1244 : 1	1201 : 1	631 : 1

The University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation (RWJF) recently compiled and published the 2012 health statistics by county and state ranking. The above table highlights Mohave County, AZ, Clark County, Nevada and San Bernardino County, California. The RWJF strongly believes that health behaviors such as smoking and obesity are closely related to where you live,learn, work and play. Statistics show that if an individual is born and raised in poverty they will be more likely to be a smoker and have poor health when they are adults. Likewise, if an child is raised within a good educational and child care setting they are much more likely to participate in healthy activity as an adult.

The RWJF has not just compiled thousands of pieces of statistical data but they have also developed a program to help community educators, physicians, advocates, and local leaders to learn how to work together to create healthy communities. The County Roadmap is available at countyhealthrankings.org and offers assessment tools and resources for community advocacy. Log on today and get involved in helping to change the lives of those around you.

Up in Smoke

Smoking possible cause of failure after Hip & Knee Replacement Surgery

Two studies presented at the 2012 annual meeting of the *American Academy of Orthopedic Surgeons* in San Francisco highlighted the dangers that smoking poses to patients after total knee or hip replacement surgery.

The first study looked at more than 600 total knee replacements performed between 2005 and 2009 at Sinai Hospital of Baltimore, and the Bonutti Clinic in Illinois. Among the patients, approximately 115 were smokers.

The researchers found that the overall revision rate – meaning the number of that had to be redone – was 10 times higher for smokers compared with nonsmokers. Smokers also had a significantly higher rate of complications compared with non-smokers, including blood clots, abnormal heartbeat, irregular heartbeat, urinary tract infection and kidney failure.

The second study used data from 535 hip replacements surgeries in New Albany, Ohio between 1999 and 2009. The results show there were 33 failures at an average of 18 months after surgery, which translates into a 6.2 percent failure rate. When broken down into smoking status, failure rates were 11 percent in smokers, 5.3 percent in previous smokers and 3.8 percent in nonsmokers. When taking into account only smoking-related failures, the failure rate was 9 percent in smokers and 3.6 percent in nonsmokers.

Why this difference in failure rates between smokers and nonsmokers?

Nicotine constricts blood vessels, so wounds get less oxygen and healing nutrients, slowing and perhaps interfering with healing. Some research indicates that smokers may be getting as much as 25% less blood to the wound than nonsmokers. The clinical effects of smoking on bone and wound healing include longer times to heal, higher rates of nonunion, and higher rates of infection and wound complications.

Cigarette smoke contains about 5,000 chemical agents and more than 60 carcinogens, toxins, and poisons such as arsenic, ammonia, methane, butane, and cadmium—in addition to nicotine, according to research conducted at the University of Pennsylvania.

Animal studies mirror the results of smoking seen in humans: delayed healing, reductions in trabecular bone, decreased collagen synthesis, and increased pro-inflammatory cytokines. Whether these conditions are due to the presence of nicotine or to one or more of the other lethal substances in cigarettes, however, has yet to be determined.

Smoking by the Numbers

The *Centers for Disease Control* (CDC) estimates that approximately 43 million Americans smoke. Launched earlier this year the CDC started a new stop smoking campaign, *Tips from Former Smokers.*

Smoking remains the leading cause of preventable death and disease in the United States, killing more than 443,000 Americans each year. Cigarette smoking costs the nation $96 billion in direct medical costs and $97 billion in lost productivity each year. More than 8 million Americans are living with a smoking-related disease, and every day more than 1,000 youth under 18 become daily smokers. Still, nearly 70 percent of smokers say they want to quit, and half make a serious quit attempt each year. The Tips from Former Smokers campaign (1-800-QUIT-NOW) provides motivation, information, and resources to help.

A combination of medication, education, counseling and support groups increases your chances of smoking cessation. Research suggests quitting at least 6 weeks prior to joint replacement surgery and not starting back until complete wound healing and bone in-growth has occurred.

A Nation in Motion

Because of my orthopedic care I can.....

The American Academy of Orthopedic Surgeons (AAOS) recently launched A Nation in Motion, a new national campaign highlighting the value of orthopedic care for people at every stage of life. The campaign centers around the inspiring stories of people whose lives and mobility have been restored, who are back at work and doing what they love because of their orthopedic care.

Patients are invited to share their personal orthopedic care stories on the website and to play A Nation in Motion The Game, an interactive, easy-to-play game illustrating when orthopedic care may be needed and how it can restore mobility throughout life.

Bone and joint health injuries and conditions prevent people from remaining active and enjoying life, but also from providing for themselves and their families.

"More than one in four Americans have bone or joint health problems, making these health concerns the greatest cause of lost work days in the United States," said John R. Tongue, MD, AAOS president. "When orthopedic surgeons restore mobility and reduce pain, people are able to get back to work and lead independent, productive lives. It is imperative that we preserve access to orthopedic care as it is key to ensuring that our communities, workforce and economy remain healthy and strong."

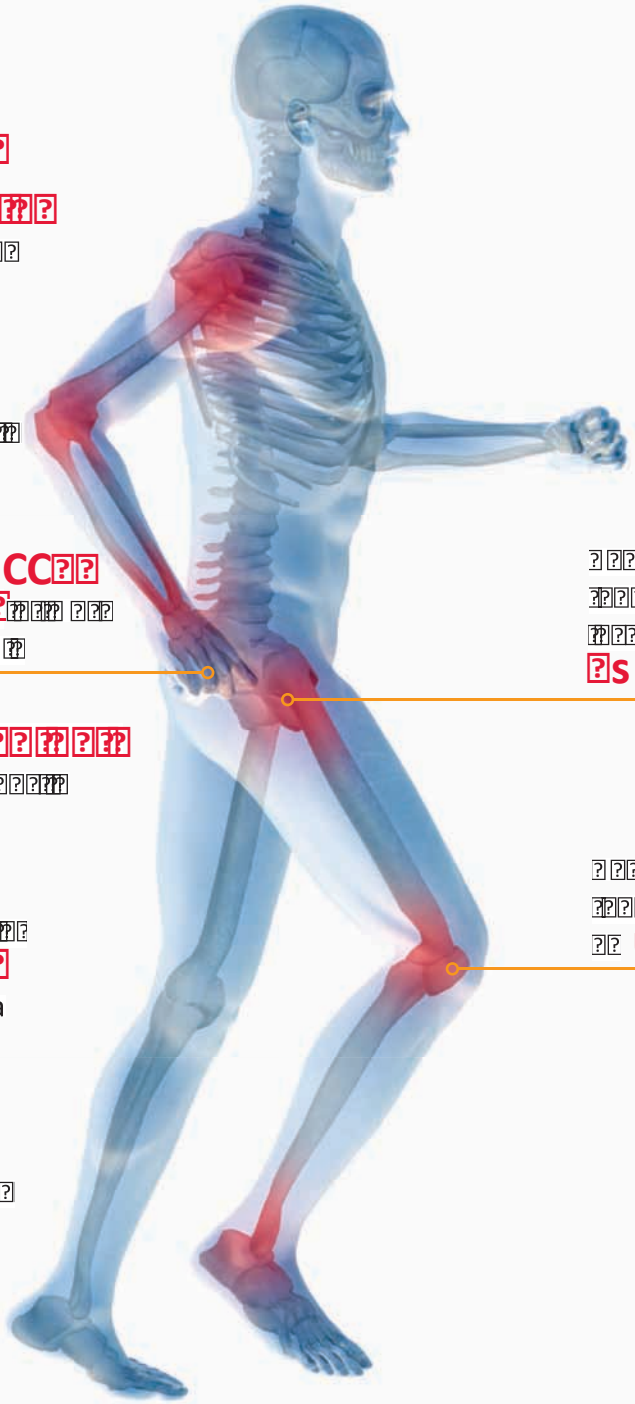
Hundreds of patient stories already are featured on the website, including inspiring stories of people fighting cancer, recovering from traumatic accidents and returning to work after compassionate and successful orthopedic care.

To further showcase the value of orthopedic care, the A Nation in Motion campaign website includes an electronic game that illustrates the many reasons why people may need high-quality orthopedic care in their lives, and provides players with relevant orthopedic facts and figures.

Through the voices of patients, we hope to empower others to embrace their health and take back their lives by discovering the value and benefits orthopedic care offers patients by restoring mobility, reducing pain and getting people back to doing what they love. To learn more about the campaign, play the game, or to read inspiring patient stories, please visit www.ANationInMotion.org.

A Nation in Motion™
ONE PATIENT AT A TIME

Bone and joint health problems are among the most prevalent and debilitating health challenges that Americans can face.



AAOS
American Academy of Orthopaedic Surgeons

Recent Speaking Engagements:

From Sea to Shining Sea

In the last year Dr. Lock has lectured across the country. His two most recent speaking engagements were both at national meetings in coastal California and the rolling hills of West Virginia.

Dr. Lock attended the American Academy of Orthopedic Surgeons conference in San Francisco, February 7-11, 2012, held at the Moscone Center, where he presented (pictured left) and participated in a Zimmer Expert Panel discussion regarding the Anterior Supine Hip Replacement with Computer Navigation.

Dr. Lock also spoke at the 52nd Postgraduate Seminar of the American Osteopathic Academy of Orthopedics. The meeting was held at the Greenbrier Resort, May 4-6, in White Sulphur Springs, West Virginia. Dr. Lock spoke on Computer Assisted Hip Replacement surgery.

Tri-State Orthopedics
2000 Hwy. 95, Suite 200
Bullhead City, AZ
86442