

ACSM **FIT** SOCIETY. PAGE

Letter from the Editor

by Dixie L. Thompson, Ph.D., FACSM

Welcome to the Fall 2012 edition of the **ACSM Fit Society, Page, supported by Liberty Mutual**. Sustaining an injury while being active can happen to anyone regardless of age or level of fitness. Because we can't prevent all injuries, it is important to learn how to treat the injury and to return to activity as soon as possible. In this issue, you will read about some common injuries and surgeries. We hope the information and tips contained here give you helpful advice when you face physical challenges.

After you have read this information that ACSM experts have prepared for you, please feel free to share it with friends and family. We hope these articles will help you prevent and properly treat fitness injuries.

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THEME: INJURY MANAGEMENT AND RECOVERY

Understanding ACL Injuries

by Margot Putukian, M.D., FACSM



Participating in exercise and sports is a positive experience and should be encouraged for everyone regardless of age or sex. Unfortunately, sports-related injuries can occur, including those that are more severe than others. For individuals participating in sports that involve cutting or pivoting, a particularly challenging injury is one to the anterior cruciate ligament (ACL). When the ACL is injured, it is considered a season ending injury that most often requires surgical reconstruction in order for the athlete to return to competitive play. The surgery typically requires rehabilitation that can take 6 to 9 months to complete. Because of this, when an athlete tears her/his ACL, it can be pretty devastating. In the following paragraphs you'll read more about the role the ACL plays in movement and what can be done to prevent this dreadful injury.

The ACL is a ligament that connects the femur (thigh bone) to the tibia (lower leg bone) and is one of four major ligaments in the knee. The ACL is particularly important in stabilizing the knee during pivoting and cutting activities. Anywhere from 80,000-250,000 ACL injuries occur per year in the United States, with about 50%

occurring in athletes 15 to 25 years old. ACL injuries are most common in women's gymnastics, football, wrestling, lacrosse, soccer, basketball, and volleyball. ACL injuries occur more commonly in women than men, with rates anywhere from 3-5 times higher in sports with identical rules, such as basketball and soccer. At the college level, reports for women's basketball put the incidence of ACL injury at 0.23 per 1000 athlete exposures, compared to 0.07 in men, and 0.28 in women's soccer compared to 0.09 in men's soccer.

The typical mechanism of ACL injury is a non-contact injury that occurs while the athlete is pushing off twisting, pivoting or changing direction while decelerating. Consider the defender that slows down while following his/her opponent, then tries to push off while changing direction. Another common mechanism is a knee that is almost completely extended while an athlete is trying to slow down, or while landing from a jump, especially if in combination with twisting, pivoting or changing direction.

Is there anything that puts an athlete at greater risk for sustaining an ACL injury? Several factors have been considered as "risk factors" for ACL injury including anatomical, environmental, hormonal, neuromuscular or genetic. It is likely that these injuries are multifactorial. There may be muscle imbalances that occur and in combination with anatomical or other risk factors, place the athlete at greater risk for injury. Girls have more reliance on their quadriceps compared to their hamstring muscles, putting them at a greater risk of injury. Several researchers have demonstrated that girls tend to have an "at risk" jump landing position where their knee and hip is less flexed, and there is more likelihood for the knee to buckle inwards (into "valgus") compared to their male counterparts.

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ACL Injuries (continued from page 1)

What typically occurs when an athlete tears the ACL? When an athlete sustains an ACL injury, the typical history is that when trying to plant, push off to pivot, and the knee buckled, and the athlete felt a “pop” or a shift in the knee. Typically, the athlete does not return to play and the knee swells pretty quickly, and it is obvious that something isn’t right. Sometimes the pain resolves and the athlete feels fine, trying to return to play only to have the knee buckle again when planting or pivoting. An athlete with the typical mechanism of injury should seek the attention of the team’s athletic trainer, if available, or see a sports medicine physician. The physical exam findings along with the history are often enough to determine that an ACL injury has occurred. ACL injuries can occur in isolation or can occur in combination with other injuries. Tears of the medial collateral ligament (MCL) or the meniscus (cartilage) of the knee and/or bone bruises commonly occur with ACL tears.

Fortunately, ACL injuries are well treated with surgical reconstruction, and the return to high-level athletic endeavors is commonplace. For the athlete that tears the ACL but does not participate in cutting/pivoting sports (*i.e.*, a runner or swimmer), non-operative treatment can be considered. The rehabilitation required after surgical reconstruction is lengthy given the nature of the injury and the repair. The usual time to heal and return to full functional activities is 6 to 9 months, with the quality of rehabilitation with an athletic trainer or physical therapist being important in returning an athlete to full function.

Is there anything that can be done to prevent this injury? An exciting area of sports medicine research is in the prevention of ACL injuries, using a combination of exercises and training regimens that can also improve performance. All of these programs incorporate some basic elements: balance training, plyometrics, strength programs

and jump landing techniques. Working to strengthen the hamstring muscles, train the hip and trunk musculature, work on landing techniques as well as using cues such as “light as a feather” to encourage athletes to land lightly where the knee is flexed instead of extended. These preventive ACL programs have been shown to be extremely successful in not only decreasing the incidence of ACL injuries, but also are useful in improving strength, balance and proprioception, thereby improving performance. These programs are ideal for youngsters given the increased incidence of ACL injury in teenage to college age participants.

ACL injuries are severe knee injuries that can be challenging for the athlete. Fortunately, the treatment of these injuries has evolved and is almost always successful. With the increased implementation of prevention programs, the hope is that we can prevent these injuries from occurring and keep people active.

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Q&A

by Anthony Luke, M.D., FACSME

Q: I’ve had some chronic Achilles tendon pain. My doctor says there’s a partial tear in the tendon but I don’t need surgery. I hear many of the pro athletes use “special PRP injections.” What are these?

A: Platelet-rich plasma is one of the most popular and controversial treatments in sports medicine and orthopaedics at this time. The treatment has received recent attention in the media since many high profile pro athletes have travelled to get treated. Platelet-rich plasma is a concentrate of platelets and associated growth factors (GFs), obtained from spinning down a sample of the patient’s own blood. Many practitioners are utilizing it in their practices, in conjunction with ultrasound imaging, often charging out-of-pocket for the procedures or for the costs of preparation kits.

There are many outstanding questions for use of PRP. An important question whether the technique is actually effective. One review in the *Clinical Journal of Sports Medicine* identified eight studies that showed some positive results after the use of PRP after rotator cuff surgery, elbow and patellar tendon issues (tendinosis), and Achilles tendon injuries. However, there are some well-designed studies that do not

show benefits. Unfortunately, there is still need for further research before knowing the clear effects of PRP treatments. There are also questions about what techniques should be used with PRP. There are different methods that are recommended for example activated and inactivated products, different spinning techniques (once or twice) as well as, different concentrations based on machine/process. There are also different protocols including how often and when the injections should be performed. Also there are technique factors for example using ultrasound to guide the injections, or whether needling of the tendon is part of the procedure. The PRP injections are sometimes combined with needling procedures that can stimulate healing in a tendon, muscle or ligament. These procedures would most likely be done by orthopaedic surgeons, sports medicine specialists, physical and rehabilitation MD’s or radiologists.

In summary, PRP is an interesting option which most physicians still feel is experimental and there are no ‘best practices’ related to when and how it should be used. However, these treatments continue to be a hot topic of conversation when reviewing treatment options for chronic musculoskeletal problems. So far, no treatment is a silver bullet for long standing problems and certainly rehabilitation exercises and a careful recovery plan should be part of any injury management plan.

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Rehab of the Shoulder

by Emma W. White, PT, DPT



Arguably, the shoulder is the most complicated joint in the body to rehab following an injury. Why is this you might ask? The shoulder is often described as a golf ball on a tee since the head of the humerus (upper arm bone) is 3-4 times the size of the shallow surface (glenoid fossa) where it articulates. This is both good and bad. Good because this joint allows for a large degree of movement, no other joint in the body can move about a full 360° radius. However, because of this amount of movement, it tends to be a joint that is relatively unstable making it a prime target for injury. Full movement of the shoulder depends on several joints, not only the glenohumeral joint, but also the acromioclavicular (connects the end of the collar bone to the shoulder blade) and the sternoclavicular joint (connects the front part of collar bone to breast plate), also known as the sternum. These (3) joints then allow for a synchronized orchestra of movement. Surrounding the shoulder joints is a host of muscles and ligaments. Ligaments connect bones to the shoulder and tendons connect the bones to surrounding muscle. It is truly a harmonious act of interdependent motions. The statement “the sum is far greater than the parts” definitely applies to the shoulder.

Most problems associated with the shoulder are related to injury affecting the soft tissues; muscles, tendons, and ligaments. These soft tissues play a big role in stabilizing the shoulder. While fractures of the bones in the shoulder can and do happen, it is far more common to see injuries causing the soft tissues to be stretched and weakened. Shoulder instability describes a condition when the shoulder feels like it might “slip out of

place.” This most often results when muscles and ligaments that maintain the position of the shoulder become stretched beyond their normal limits. This can cause the joint to become separated, loose or even torn which may result in a dislocation. You may have heard the phrase, repetitive motion injury. The shoulder can become unstable when activities such as pitching in baseball which involves a lot of repetition, or swimming which both requires large degrees of motion repeated over and over can place considerable stress on the shoulder. The repetitious nature of these type activities over time creates a stretching affect on the muscles and ligaments. When ligaments become overstretched they can no longer effectively serve their stabilizing function.

Another common problem is shoulder impingement. This occurs when tendons become inflamed and get pinched between the bones. When this happens it causes significant pain and a limitation in movement. In either case, the rotator cuff muscles are often at fault. The rotator cuff consists of four relatively small muscles that are responsible for keeping the head of the humerus centered in the glenoid fossa. Think of these muscles like four legs of a chair, if one leg is cracked and subsequently weakened the chair becomes unstable. Should any of these muscles become weakened, there is a loss of the “balanced” position allowing the shoulder to glide high in the glenoid fossa. While this may not sound like a big deal, it can lead to big problems if not addressed and can lead to an actual tear of one of the rotator cuff muscles.

So when an acute injury occurs, what should you do?

As with many other joint conditions you should start by:

- Resting the shoulder (especially from the activity that caused the problem), this reduces further damage
- Applying ice—cools the tissue, reduces swelling and inflammation and reduces pain
- Using compression—a firm wrap will help reduce bleeding (if present) and swelling. Be careful not to make it too tight however as this may result in decreased circulation and contributes to tingling/numbness.
- Consulting a medical professional (M.D., P.T.) especially if concerned about the injury or if pain and swelling worsen. Getting an accurate diagnosis is essential for proper rehab of the shoulder.

Once the acute phase has resolved, then

focus on keeping the shoulder balanced and functioning optimally by maintaining full range of motion and adequate strength. Restoring full shoulder motion is very important to allow full recovery. Make sure you can:

- Reach behind your back and touch as high as possible
- Reach up behind your head and touch as far down your back as far as possible



As movement improves then work towards regaining strength and balance of the muscles around the shoulder and shoulder blade. Again these muscles are extremely important in keeping the humerus centered in the glenoid fossa. For specific exercises you should consider consulting with a Physical Therapist, certified Athletic Trainer, or a Sports Medicine Physician, especially if the injury resulted in major damage. There are also a number of websites available that can provide additional information such as www.moveforwardpt.com. See sample exercises, these may help but oftentimes a more specific program is needed tailored to your specific needs depending upon the injury. Good Luck and keep that shoulder moving.



Recovering From an ACL Injury

by Dr. Jerry Lin



“My doctor told me I tore my ACL. Do I need surgery?”

Yes and no. An ACL (anterior cruciate ligament) surgery is an elective procedure, meaning it is not a surgical emergency. It all depends on what level of activity you wish to continue after the injury.

If your normal activity level consists of light walks and jogs, then an ACL surgery is probably not needed. On the other hand, if you love rigorous sports that involve lots of sprinting, stopping, jumping, and turning, then surgery may be beneficial.

To understand this further, it is helpful to consider the function of the ACL itself. The ACL is a ligament that mainly functions to provide knee stability with sudden changes in movement. For instance, playing basketball involves a lot of sprinting and stopping. In this type of movement, the ACL prevents the shin bone (tibia) from moving forward too much and causing damage to the knee. The ACL is also responsible for keeping the tibia from twisting too much inward. This can occur when, say, a basketball player tries to quickly pass around an opponent.

However, in everyday walking, the ACL plays a less major role in providing knee stability. The main structures that support walking are the quadriceps and hamstring muscles, which cross in front of and behind the knee, respectively. The quadriceps extends the knee, while the hamstrings flex the knee. In theory, if both of these muscles are strong and are functioning properly, this is sufficient for walking and other light aerobic activities.

In general, ACL surgery is done for those individuals who wish to pursue highly demanding activities. A professional athlete will often choose surgery given their short

career span. In some cases, surgery is chosen for intolerable pain and recurrent giveaway of the knee. Based on your activity level and health needs, you and your doctor should assess whether surgery is warranted.

“My knee hurts and it’s swollen. What can I do?”

Following the simple acronym, RICE—rest, ice, compression, and elevation—may be a safe way to start.

Resting involves keeping your knee relatively stable and not stressing it with repetitive bending activities. It may also be helpful to use an assistive device such as crutches to offload the injured knee.

Icing reduces the amount of blood entering the area and slows down inflammation. Generally, you can apply ice on your knee for 10 minutes at a time as often as needed with at least 30-minute breaks in between applications. Make sure the ice is in a bag and covered with a piece of cloth so you do not get an ice burn. A bag of frozen peas can also do the trick.

Compression limits the amount of swelling. You can use an over-the-counter (OTC) ACE bandage or a neoprene knee sleeve.

Finally, elevating the leg is important in reducing the remainder of the swelling. When sitting, try to keep the injured leg propped up so that fluid can travel back to the main body. When lying flat, place a pillow or two on the back of the injured leg’s ankle to keep it elevated above heart level.

“What about medications?”

Medications can be helpful for both pain and swelling. Consult with your physician about which medication is best for you. Be careful to avoid medications that may negatively interact with medications and/or therapies. Generally, OTC medications are safer to use and are more economical.

For mild to moderate pain, consider acetaminophen. Make sure you do not take more than 3 grams per day as this may be harmful for your liver. It is important to note that acetaminophen will only help with pain, not swelling.

For mild to moderate pain with swelling, consider using ibuprofen or naproxen. Take the medication as directed for no longer than a week unless directed otherwise. If ibuprofen or naproxen is not enough for pain control, try combining either one with Tylenol for an additive effect.

If OTCs are insufficient, your doctor may

prescribe you an anti-inflammatory medication with or without a pain killer. Some doctors may also want to inject steroids into the knee to calm the inflammation. In some cases, if there is excess fluid in the knee, the doctor may first drain the fluid before injecting the steroid.

“My knee feels a little better—now what?”

Working with a certified physical therapist, athletic trainer, or other medical professional would be the next step. Your initial appointment will generally take about 45 minutes and involve a thorough history and physical examination. It will also be a time for you and your therapist to discuss what your treatment program will be and the goals you wish to achieve.

Follow-up sessions are generally about 30 minutes and occur twice a week for 8 weeks. These sessions will entail the use of physical applications (*e.g.*, cold packs), hands-on therapy, and exercises to strengthen the knee stabilizers. The specialists will also work on your gait and balance and determine if you need an assistive device, such as a cane, or a brace to limit knee pain and knee giveaway.

“If I do decide on surgery, what will the surgeon do, and how long is the recovery process?”

Torn ACLs are generally not repaired, but replaced altogether. This is because the ACL receives very little blood and thus has poor healing capacities. To replace your ACL, the surgeon will generally use a piece of tendon in your body that does not have a major function. The surgeon may also choose to use a cadaveric or animal specimen.

Surgery is done arthroscopically, which means that the surgeon will make a small incision and place a scope to look into the knee. Small surgical instruments are placed through another incision and used to remove the torn ACL and insert the new ACL.

The recovery process takes about six months. During that time you will have a more focused therapy program with frequent follow-ups with your surgeon.

“So, what’s the take home point?”

ACL tears are generally treated conservatively. If playing rigorous sports is important to you, then surgery may be right for you. Otherwise, you can enjoy a good quality of life with the proper treatment plan.

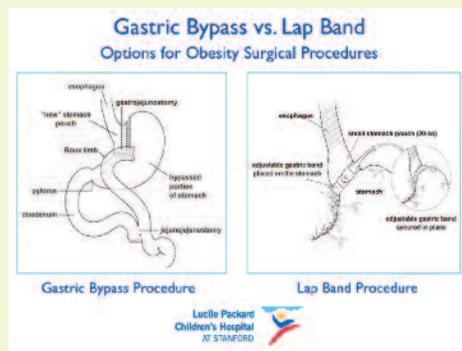
Optimizing Long-term Recovery from Bariatric Surgery with Exercise

by Paul Sorace, M.S., RCEP
Tom LaFontaine, Ph.D., FACSM, RCEP



Bariatric Surgery

Bariatric surgery is a popular surgery for obese persons with a Body Mass Index (BMI) of 40 or higher or for those with a BMI over 35 with metabolic disorders present. See the sidebar for BMI classifications. Over 220,000 bariatric surgeries were performed in 2008. There are a variety of different bariatric surgeries but the most common are gastric bypass and lap band (see figure).



Provided courtesy of the Lucile Packard Children's Hospital at Stanford

With gastric bypass surgery, a small pouch is created at the top of the stomach that limits the amount of food that the person can consume. Also, a y-shaped section of the small intestine is attached to the stomach pouch that enables food to bypass sections of the small intestine, reducing nutrient absorption. With the lap band procedure, an adjustable band is placed around the top of the stomach

creating a small pouch and a narrow opening to the rest of the stomach. This limits the amount of food that the person can eat at one time and the narrow opening slows the emptying of the food from the upper stomach pouch. After the surgery, the lap band can be adjusted with saline solution to tighten or loosen the band. This is known as an adjustment and is sometimes needed to keep food intake at a minimum and maintain the feeling of fullness. These surgeries can be performed as an open procedure (one large incision), but they are typically performed as laparoscopic surgery (several small incisions). Regardless, proper rehabilitation including gradual progressive exercise is needed after either surgery to help the person recover and increase the likelihood that weight loss from the surgery will be permanent.

Body Mass Index (kg/m²) Classifications

- < 18.5 Underweight
- 18.5-24.9 Normal Weight
- 25.0-29.9 Overweight
- 30.0-34.9 Obese class I
- 35.0-39.9 Obese class II
- > 40.0 Obese Class III

Exercise/Physical Activity Benefits

It is well documented that post-bariatric surgery patients who do not adopt a physically active lifestyle are more likely to experience weight regain. Gradually increasing levels of physical activity and exercise is critically important in order to improve exercise adherence and maximize weight loss post-surgery and prevent weight regain. It is important to note that bariatric surgery does not increase metabolism whereas exercise can. Following uncomplicated bariatric surgery, most individuals will be allowed to begin light activity or exercise such as walking within a few days. Most surgeons will clear the person to perform other activities such as stationary cycling within one to two weeks post-surgery. Activities such as walking, cycling, swimming, elliptical training and other aerobic activities should be the initial focus of an exercise program for a post-bariatric surgery patient. This is because it is the aerobic activities that produce the greatest amount of calories burned.

Resistance training (RT) or strength training will probably be delayed a little longer than aerobic exercise. Six to eight weeks is a reasonable time frame before RT is initiated, but this varies with the individual.

RT performed 2-3 days per week, should be combined with aerobic exercise for optimal outcomes. A well-rounded RT program that begins with low resistance and high repetitions and progresses over weeks to months to a program of moderate to high resistance and lower repetitions may be most effective in these patients. Anytime there is a significant weight loss (10% or more of bodyweight), muscle tissue may be lost along with fat mass. As muscle is lost, a person's metabolism slows, which can make weight loss more difficult. Also, with a loss of muscle comes a potential loss of physical function. Overweight and obese persons who are ambulatory often have sufficient lower body strength due to their hips and legs supporting extra body mass for a number of years. However, a lack of adequate upper body strength can make certain activities of daily living problematic.

Resistance training offers other benefits that the surgery cannot provide. Most post-bariatric surgery patients are excited to reshape their bodies as weight continues to be lost. Resistance training can provide the person with an additional sense of confidence as they see their body taking a physically-fit appearance. This is extremely beneficial for self-confidence and self-efficacy (belief in the ability to succeed).

Exercise/Physical Activity Suggestions

The post-bariatric surgery patient is usually deconditioned initially and may only tolerate short bouts of walking (5 minutes). A reasonable initial goal is to accumulate 20 minutes of walking, most if not all days of the week. Over time, they should increase the length of sustained activity to 10 minutes per bout perhaps totaling 30 minutes. Most post-bariatric surgery patients will tolerate an increase in duration before intensity. The intensity should be light to moderate (40-59% of heart rate reserve) initially, but should gradually be progressed to moderate to vigorous intensities (60%-85% predicted heart rate). If weight-bearing activities are not well tolerated, activities such as cycling or swimming can be used. Long term, the person should try to exercise aerobically, five to seven days per week for 45-90 minutes for long-term weight management.

Resistance exercise should be performed two or three times per week, working all of the major muscle groups of the body. A variety of equipment can be used. However, some weight machines may be too small to comfortably accommodate a larger person. In this case, free weights or

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Bariatric Surgery (continued from page 5)

elastic tubes/bands may be a better choice. A resistance that allows for 8-12 repetitions per set should be used, with 8-10 exercises for the entire body. Higher volume (multiple sets) and split routines (upper body and lower body in separate routines) can be implemented depending on the person's fitness goals, how well they adapt, and other factors.

Stretching should be performed several times a week, even daily. Start with light, gentle stretching for 20-30 seconds per stretch, emphasizing the hips, thighs, shoulders, back and neck. Increased joint flexibility can help with ease of movement, which often is restricted with overweight and obese persons.

In summary, recovery from bariatric surgery and long-term success in weight loss and weight loss maintenance is enhanced with a progressive combined program of aerobic activity, resistance training, and flexibility exercise.

THE ATHLETE'S KITCHEN

Nutrition and Injuries

by Nancy Clark, M.S., R.D., FACSM



Sad but true, being injured is part of being an athlete. Not surprisingly, injured athletes have numerous questions and concerns about nutrition as it relates to healing. Often, they attempt to pump their bodies with super nutrition, similar to pulling out the fire engine in an emergency situation. While enhanced post-injury nutrition does not result in rapid healing, eating well every

day of training is a wise bet. That way, if you do get injured, your body will already be in great nutritional shape.

The following article answers the nutrition questions injured athletes commonly ask. Hopefully, you are healthy and don't need these tips. But when, and if, an injury comes, you'll know the best nutritional attack.

Q: I broke my leg in a skiing accident. If I start drinking more milk will the bone heal quicker?

A: No. Most bones take 6 to 10 weeks to heal. Period. Extra calcium will not speed the process. But adequate calcium is important for overall bone health. Be sure to eat at least 3 calcium-rich foods per day (cereal/milk+lunch/yogurt+dinner/milk).

Hopefully you have already invested in optimal bone health by feeding your body plenty of calcium pre-injury. The teen years are particularly prime times for enhancing bone strength. Unfortunately many teens drink more soft drinks than milk. Throughout your lifespan, be sure to maintain bone strength with a strong calcium intake. This advice goes for men as well as for women. Few men recognize that osteoporosis can be a problem for men who live older than 70 years.

Q: Should I start taking vitamins to help recover from knee surgery?

A: You do need good nutrition to enhance post-surgical healing. But vitamins are only one little piece of the nutritional picture. Minerals such as iron and zinc enhance healing, as does protein. Your best bet is to first eat wholesome foods because they supply the nutrients you need. Given that many breakfast cereals, snack foods, and energy bars are vitamin-fortified, you may already be consuming far more vitamins than you acknowledge. Reading food labels can give you helpful information about the amount of vitamins in your standard food choices.

Instead of rushing to buy vitamin supplements, first buy piles of colorful vegetables, such as broccoli and spinach. One small stalk of broccoli provides the recommended intake of Vitamin C, a vitamin that enhances healing. Other vitamin-rich foods include oranges and all citrus fruits, kiwi, and cantaloupe. Mineral-rich foods include lean meats, yogurt, and milk. Hopefully, you have been routinely eating these foods pre-injury so your body is already in great nutritional shape.

Q: My stress fracture hasn't healed in 6 months. Could my vegetarian diet be slowing the healing process?

A: Unlikely, if you are eating a balanced vegetarian diet that is rich in tofu, beans, nuts, and other plant proteins. But if your vegetarian diet is simply a meatless diet that lacks alternate proteins, then, YES your diet is insufficient! The deficiency of protein, and the companion nutrients iron and zinc, may not only slow healing, but also may have contributed to the poor bone health that preceded the stress fracture.

Among active women, inadequate calorie intake that cumulates in a protein deficient "vegetarian" diet (such as the too-many-salads diet) can contribute to amenorrhea (loss of the menstrual period). This results in reduced bone density and a higher risk of stress fractures. Note that amenorrheic women runners have a two- to four-times higher risk of getting stress fractures than do their regularly menstruating peers.

If you are concerned about the adequacy of your vegetarian diet, your best bet is to get a nutrition check-up with a registered dietitian. See the referral network at www.SCANDpg.org to find a sports nutritionist in your zip code area. This nutrition professional will be able to help you consume not only enough protein, but also iron, zinc, and calcium—all nutrients involved in bone health. Hopefully, you'll do this before you get another stress fracture!

Q: I'm afraid I'll gain weight now that I'm injured and can't exercise the way I like to.

A: If you eat mindfully, and pay attention to your hunger signals, you'll notice that the more you exercise, the more you'll eat; the less you exercise, the less hungry you'll be and the less you'll eat. But life factors easily confound this simple system and some athletes do gain weight because they eat for reasons other than hunger. For example, an injured athlete who meets up with his teammates for dinner (after they have worked out) may eat just as much as they do—which could be 600 excess calories for him.

Many active people blame weight gain on lack of exercise, but stress may be the real problem. That is, an athletic injury can easily create stressful life changes, depression, and unhappiness. Athletes who comfort themselves with food will indeed gain undesired body fat.

Q&A (continued from page 2)

Q: I have an upcoming hip replacement. I have been an avid runner for years. I'm 63 years old, and I want to continue to be fit. Is there anything I can do to help my recovery from surgery?

A: With the population aging, total knee and hip replacement surgery will continue to be needed so the baby boomers can maintain good function and exercise. Exercise has major health benefits, so groups like the American College of Sports Medicine encourages everyone to remain active across the lifespan. The medical profession continues to look into how to make "arthroplasty" surgeries more effective especially for good functional outcomes. Rehabilitation before and after surgery is something patients can do which can really affect post-surgical recovery. A recent review of the literature from Australia showed that, compared to non-exercising patients, participants awaiting hip replacement surgery had improvements in pain and self-reported function if they did an exercise intervention before surgery. The same differences were not noted for

knee replacement surgery though there were no negative effects from exercising beforehand. We certainly know that exercise after surgery is critical for a successful recovery. Most surgeons feel the rehabilitation accounts for 50% of a positive outcome once the surgery is done successfully. Following joint replacement, it takes, on average, 6 months for individuals to really gain good results with pain, joint motion, and functional activities. People can often be somewhat active almost immediately when they leave hospital as most are encouraged to walk as early as possible. The outcomes from joint replacement surgery continue to show very acceptable results and an active life can be expected for most individuals. Patients are generally allowed to perform many lifestyle sports such as golf, biking and even some easy skiing after surgery. You shouldn't worry about becoming a "couch potato" after surgery. Although you may need to modify the kinds of activities you perform, you will have rich and rewarding options for remaining physically active.

The Athlete's Kitchen (continued from page 6)

Injury is a good time to learn that your body won't get fat on you if you are unable to exercise. If you eat when you are hungry and stop when you are content, you won't gain weight. Just be sure to use food for fuel, not for entertainment or for lifting your spirits. Note: if you are very underweight, such as an athlete with anorexia, you may gain some weight as your body takes advantage of the opportunity to restore itself to a more normal weight. You'll get healthier, and that is a good thing!

Important: do not severely restrict your food intake when you are injured. Your body needs adequate nutrition to heal your injury. Eliminating healthful foods hinders the process. Be wise!



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