

June 2014

Healing and Strengthening Your Ankle After a Sprain



Ankle sprain, one of the most common injuries, affects about 25,000 people every day. An ankle sprain is **an injury to one of the ligaments in your ankle**. A sudden twisting motion can cause these tough bands of tissue to stretch too far or snap entirely. Wearing high heels, playing sports that require swift changes in direction or even just walking on an uneven surface are all risk factors for sprained ankles.

Symptoms include difficulty moving the ankle, instability of the joint, pain (which can be mild to severe), swelling and bruising. You may hear a popping sound while the injury occurs. While ankle sprains sometimes heal on their own, most experts suggest treatment to avoid a recurrence. Through a physical examination, a clinician can usually diagnose the extent of the injury.

Mild sprains may heal on their own with some rest and self-care. Other things you can do to speed up healing include the following:

- **Avoid putting weight on the ankle whenever possible.**
- **Apply ice to reduce pain and swelling.**
- **Elevate the ankle on a pillow when you sit or lie down.**
- **Use an ankle brace for added support.**
- **Take anti-inflammatory painkillers (if your physician approves) to ease discomfort and swelling.**

Treatment for a more serious sprain usually consists of the same self-care routine, along with a prescription for physical therapy. Exercise **helps healing** and can **control the formation of scar tissue**, the body's natural reaction to injury. Scar tissue protects the injured area, but it can also decrease strength and flexibility in the joint if the ankle is simply left to heal on its own. A rehabilitation plan featuring exercises that we design specifically for you can **increase strength and flexibility** in the ankle and **prevent reinjury**.

In cases of severe sprain, surgery may be necessary to repair the damaged ligament. After surgery, you may need to wear a cast for a few weeks. After that, a rehabilitation program of physical therapy designed with your physician's input will get you back on your feet again, with an ankle that is strong, flexible and free from pain.

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Be Hip to Metal-on-Metal Implants



If you have had a hip replaced with a metal-on-metal (MoM) implant, you may be concerned about reports of health problems with this type of artificial joint. Hip implants are fabricated from metal, plastic, ceramic or a combination of materials. Each type has risks and benefits, and it is up to you and your surgeon to decide what materials will work best for you. MoM hips are advantageous because of their **durability, stability and lower probability of dislocation.**

As MoM hip implants undergo daily wear and tear, the metal surface of the artificial joint can corrode and deteriorate, releasing tiny metal particles and ions into the bloodstream. In some patients, this can lead to pain and swelling in the hip, as well as other health problems related to the heart, thyroid and nervous system. Luckily, these problems are rare, and most people have great success with MoM implants. A good postoperative **strength maintenance program** can help keep your MoM implant prosthesis **healthy and functioning well.**

If you have recently had hip replacement surgery, we can help you during the immediate postsurgical period.

- We can suggest **some modifications and restrictions** to movement to allow soft tissues to heal.
- We can create an exercise program that will help you **regain the strength** in your knee or hip and legs so you can walk more easily.
- Isometric exercises, such as ankle pumps, quad setting for upper leg and thigh muscles, and gluteal setting for the buttocks, will help your **muscles function more efficiently** after surgery and **promote blood circulation** in your legs to prevent clots from forming. These exercises may be performed whenever you feel your legs becoming stiff.
- We can help **restore your balance** and **strengthen the muscles** surrounding the implant, which will help avoid complications and allow you to return to your normal activities quickly.

If you experience pain or swelling in the hip area or any other health problems after MoM implant hip replacement, alert your physician or surgeon immediately. Most people with MoM implants will not experience adverse effects; rather, they will find much-needed relief from the problems that led to a hip replacement in the first place.

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Does Running Cause Arthritis?



For years, runners have been warned that their favorite fitness activity puts them at risk for future arthritis. Today, however, many experts say that is not the case. While some studies have suggested that athletes who train rigorously may experience eventual deterioration of the leg joints, others have concluded that adults who run recreationally are not more prone to arthritis.

A 2013 study published in the journal *Medicine and Science in Sports and Exercise* found that runners may even be protecting themselves against osteoarthritis, the most common type of arthritis in older adults. This occurs because running can make cartilage more durable and increase the strength and flexibility of tendons and ligaments, so they are less likely to tear or sprain under stress.

Genetics, obesity and aging are considered much more significant risk factors for developing osteoarthritis. Long-term stressful activity also plays a role. Adults who run moderately two to three times a week are unlikely to be causing joint damage.

Prior traumatic joint injury is another risk factor. Injury can cause the formation of scar tissue, abnormal running technique and weight gain from decreased activity, all of which increase the risk of future problems. Because running puts increased impact on lower body joints, weight control is essential. Even if you are a normal weight, eating a healthy diet and avoiding smoking will help promote good general health and prolong your years of enjoyable running.

If you are a runner who wants to resume your sport after injury, or if you already have mild osteoarthritis and would like to continue running, we can design a program that includes **moderate running**—gradually increasing the frequency, distance and intensity according to your ability. Cross-training with **strengthening and stretching exercises** can keep your muscles, tendons and ligaments strong and flexible, thus reducing stress on the joints. In addition, we can **monitor your running technique and footwear** and ensure that you are not exercising on surfaces that are too hard, all of which are important to maintaining good health while running.

Running is an activity favored by all sectors of the population. Should you experience some joint pain from osteoarthritis, contact us. We can design a program of strengthening and stretching exercises that can help you feel better and extend your running career for years to come.

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To Stretch or Not to Stretch?



In the past, everyone was taught to stretch before engaging in physical activity. Now, however, researchers say that certain popular stretching routines are not only ineffective as warm-ups but can sometimes leave you even more vulnerable to injury.

There are two types of stretching techniques. **Dynamic stretches** are aerobic exercises of light-to-moderate intensity that stimulate blood flow and have a warming effect on the muscles

you plan to use during your exercise. **Static stretches** require extending an arm, leg or other body part to the point of tension and holding that position for a period of time, often a full minute or more.

Only dynamic stretches should be performed before engaging in physical activity, because they **mimic the movements** we make during rigorous exercise and **warm up the body**. Ideally, your warm-up routine should consist of dynamic stretches specifically targeted to the muscles you will be using in your activity. For instance, light jogging in place is a good preparation for a run, and gentle arm swings or shoulder rolls can effectively prepare a swimmer for a meet.

Static stretches done before physical activity negatively affect performance and increase the risk of injury. A 2013 review of 104 studies, conducted at the University of Zagreb in Croatia, found that static stretching before a workout reduced muscle strength by as much as 5.5% and decreased explosive muscular performance—such as jumping as high or running as hard as you can—by almost 3%. The stretched muscle becomes less responsive and may remain weakened for up to 30 minutes after stretching—clearly, not the way an athlete wants to begin a workout. Thus, **static stretches are best performed after physical activity, to promote flexibility and range of motion while minimizing post-activity soreness.**

Stretching technique also matters. Stretch only as far as you can without pain. Hold the position without bouncing, and take deep breaths to relax the body and safely increase the stretch.

When performed appropriately, stretching can make your workout **more effective** and **keep you healthy**. Unsure about which stretches are best for you? After we review your physical shape, lifestyle and the activities you participate in, we can design a program of stretches to help you maintain peak performance while avoiding injury that might sideline your physical activity altogether.

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Rearming After a Stroke



Constraint-induced movement therapy (CIMT) treats people who have had a stroke or sustained injuries that lead to limitations in the mobility of one of their arms. The unaffected arm is constrained in a sling, forcing the use of the affected arm repetitively and intensively for two to three weeks. The American Stroke Association has said that CIMT is “at the forefront of a revolution” in what is regarded possible in terms of recovery for stroke victims.

This treatment might seem counterintuitive. If you have problems with one arm, would not handicapping the other make life more difficult? In the short term, CIMT might make life more complicated. But, in the long term, it can **restore significant function** to the affected arm, instead of allowing it to become nonfunctional through disuse.

A person who suffers loss of motor function in the arm due to neurological affliction is more likely to adapt to the most efficient way to do things after an injury. The part of your brain that controls the afflicted limb is swollen, making it difficult for the brain's neurons to cause the arm to act. If the neurons in the affected part of your brain are not used as the swelling decreases, your brain learns not to use the affected arm.

CIMT “tricks” your brain into thinking that you must use your affected arm. A special glove that restricts the movement in your healthy arm convinces the brain to pour energy into using the less-efficient arm instead. As the swelling subsides, your brain **pours more resources** into using your arm, and an **increased amount of motor activity** returns. In fact, a 2000 study published in *Stroke*, a journal published by the American Heart Association, showed that brain activity actually improves with CIMT.

Physical exercise that induces use of the more-affected limb for six hours daily over two or three weeks can enhance CIMT's role in effective rehabilitation. This includes selecting tasks that **address the individual patient's motor deficits** and helping the patient **carry out a movement sequence** if he or she cannot complete the movement alone at first. Active and passive **stretching** and **range-of-motion exercises** can help strengthen the affected arm.

While CIMT has been shown to work best when started soon after the onset of your condition, it is possible to see positive effects even if treatment is started later. We will be happy to consult with your physician to design the most effective treatment for you. The faster you get started, the better your results will be.