

October 2009

Transitioning to Indoor Workouts as the Weather Changes



While some Americans are able to exercise outdoors almost year round, most of us must move our workouts indoors for at least a few months.

Transitioning in some sports or activities is easier—or at least more obvious—than in others. Ocean swimming, for instance, is a little difficult to replicate indoors, but if you play tennis or basketball outdoors throughout spring and summer, scout locations in advance and find indoor courts you can use

once the first frost hits. Remember that **10 minutes of gently going through the motions involved in your sport, followed by easy, pain-free stretching, is even more important in winter than summer.**

If you bicycle outdoors in warm weather—or even if you do not—working out on a **stationary bike** indoors is a great low-impact winter option. You need not worry about traffic, keeping your balance or avoiding potholes. Many fitness centers have bikes for individual use, as well as music-driven group “riding” sessions, with an instructor to show how to properly adjust the bike for your body and attain the levels of intensity and resistance you desire.

Similarly, **mall walking** keeps you protected from the elements and offers the possibility of a vigorous low-impact workout. Some malls have formal programs for walkers, often in the early morning, occasionally with the on-site presence of a health professional such as a physical therapist.

But no matter what your usual sport, you can benefit from a perfect-for-winter **core-strengthening routine**. Your torso—packed with muscles from shoulders to pelvis—is your core. With our help, your core can provide a great deal of power and stability, both when you exercise and when you move about in your daily life. We will be happy to help you create a core-strengthening program to improve your balance and posture and make you less prone to injury while maintaining your fitness level during the colder months.

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Getting the Best Push-up Technique



A highly flexible exercise is the push-up. Push-ups build core strength and help you get a total body workout. When correctly performed, push-ups use muscles in the **shoulders, chest, back, abdomen** and **legs**. If you perform push-ups incorrectly, however, you risk injury and may not get results from the time and effort you expended doing the exercises.

With some attention to proper form, you can perform push-ups properly and in a way that prevents injury. Generally, good push-up form and technique include the following sequential steps:

- **Lie chest-down on the floor with your palms flat and slightly more than shoulder-width apart, legs straight and toes tucked under your feet.**
- **Straighten your arms to a point prior to where the elbows lock as you push your body up off the floor, maintaining a straight body line and exhaling.**
- **Then, contract your abdominals and inhale as you bend your arms to lower your body slowly until your chest touches the floor. Keep your body straight, your knees off the floor and your feet together.**
- **Pause for a moment. Straighten your arms for a second push-up, and exhale as you raise your body.**

One benefit of push-ups is the many variations that can keep your routine interesting and fun. These include bent knee push-ups, stability or medicine ball push-ups, decline push-ups, clapping push-ups and diamond push-ups. While these terms may be unfamiliar to you, we can explain how each one is performed and determine which would be most appropriate for your health needs.

Talk to us to get started on a routine individually designed to include the best variations and techniques to help you achieve your fitness and health goals. By monitoring your form and making sure you are positioned to perform push-ups correctly, we can help you safely and effectively get the most from this form of exercise.

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Nerve Conduction on the Wrist



Just as you can feel pain in your bottom teeth when you have a cavity in a top molar, a feeling of “pins and needles” and numbness in your hand may result from a problem in your wrist or shoulder. Both are common symptoms of carpal tunnel syndrome, a condition caused by compression of nerves in the wrist and often diagnosed by manipulating the wrist to provoke symptoms—for example, tapping the front of the wrist causes tingling, squeezing it can induce pain and so forth.

However, the best test to determine what is going on in your hand is a nerve conduction velocity test, which shows how fast and how efficiently your nerves are transmitting information (in the form of electrical signals) to your brain. Using a nerve conduction velocity test, the physician can discover nerves that are not functioning optimally and diagnose carpal tunnel syndrome and other conditions.

The test is very simple: Small electrodes are placed onto the skin along the path of the nerve. One electrode sends an electrical impulse to the nerve; another electrode picks up the impulse. Calculating the time it takes for the impulse to travel between the two electrodes measures the nerve conduction velocity, or speed of transmission. Decreased speed of transmission suggests a problem with that particular nerve and can help the doctor diagnose the problem and design a plan of action accordingly.

No risks are involved with nerve conduction studies. The only side effect is a slight tingling or burning at the electrode sites from the electrical impulses—probably no worse than the feeling in your hands that brought you to the doctor in the first place!

After you have been diagnosed, we can help you modify your workplace, home environment and activities. Sometimes, a night splint or brace is used to facilitate a better sleeping position for the wrist and hand. We can also teach you specific exercises to strengthen the muscles between the shoulder blades and in the wrists and hands. Other exercises—many that can be performed at work or at home—stretch the forearms, the palm and the fist, increase flexibility of the arm/hand region and reduce tension on tendons that pass through the wrist and relieve that uncomfortable feeling in your hand.

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Treating Swimmer's Shoulder



Swimmer's shoulder is very common in young competitive swimmers. In this condition, several soft structures in the shoulder—the bicep tendon, the rotator cuff and the bursa—are impinged, or compressed, by the bony parts of the joint and become inflamed and painful. The condition can affect any swimmer, but those who specialize in freestyle or butterfly develop it most often because of the overhead motions involved in those strokes.

Because younger swimmers often get more intense technique instruction than older ones, **it is important to identify what phases of which strokes are causing pain and then work with the swim coach to be sure every stroke is being performed with the proper technique.** As the young athlete increases his or her swimming distance and becomes fatigued, even small technical flaws can contribute to shoulder stress.

Beyond the perfection of stroke technique, **dry-land conditioning is crucial.** Young swimmers would most likely benefit from a program of strength training for overall fitness, but especially those exercises designed to strengthen the shoulders' rotator cuffs and the muscles that stabilize the shoulder blade.

Proper posture is important, too, because swimmers often develop somewhat rounded shoulders, which can also contribute to impingement. **Stretching exercises make the neck and chest muscles more flexible and help counter that postural tendency.**

Drills involving kickboards (by positioning the arms overhead) and hand paddles (by increasing muscular demands) can contribute to swimmer's shoulder, although one might think that using these aids takes pressure off the upper-body joints. Instead, these drills—especially if done too often—can put stress on the shoulder and make the condition worse. Thus, it is important for the swim coach to work with us to design a training program that keeps the young swimmer as free of pain as possible.

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“Cementing” and Knee Replacement Surgery



More than 580,000 knee replacement surgeries—the vast majority of them successful—are performed in the United States each year. In this procedure, special acrylic bone cement is often employed to adhere the new artificial knee parts to your leg bones. Its technical name is polymethylmethacrylate, or PMMA.

In knee replacement surgery, the patella (kneecap) and parts of the tibia (lower leg bone) and femur (thigh bone) are replaced with components usually made of plastic and metal, most often titanium or cobalt chromium alloys. In some situations, the surgeon can allow the natural bone that surrounds the artificial joint to grow into and around the replacement parts, a process that serves to “cement” them in place, but it takes

time for this to happen. More commonly, especially in patients whose outcomes are predicted to be free of complications, the surgeon opts to use PMMA, a space-filling, load-transferring substance that helps evenly distribute weight on the joint.

Because one of the major benefits of using PMMA is that it allows the patient to immediately bear weight on the joint, **rehabilitation can begin right away.** Bending the knee can begin the day after—or even the day of—surgery, depending on the surgeon’s evaluation. The day after surgery, a hospital staff physical therapist will help the patient stand and take several steps with a walker, progressing eventually to crutches, then to a cane.

After the patient comes home, we can design and implement an ongoing rehabilitation program to continue to increase knee joint function and range of motion. Typically, patients who have had knee replacements and who have followed an exercise regimen can walk as much as they like by six weeks after surgery, and they can drive at that point, too. Patients can play golf and swim at the eight-week mark and play tennis after 12 weeks.