

**SIDEBAR** / *Lynnell Nixon-Knight*

## *Injury may first respond to treatment and physical therapy*

**S**houlder pain, even progressive shoulder pain, need not always lead to surgery. Damage to the tendons around the glenohumeral joint is one of the most common causes of shoulder pain, but various degrees of tendon degeneration may respond to non-invasive measures.

Normally, the tendons which comprise the 'rotator cuff' move easily within the subacromial space, cushioned by the subacromial bursa. If the latter becomes smaller due to inflammation, osteophytes or fluid build-up, the tendons become squeezed and impinge against the bone. This causes irritation which leads to bleeding and inflammation of the bursa or tendons. Over time, it may also develop scarring, which makes the tissue fibrous and therefore weaker and less flexible. This frequently leads to a partial or complete tear in the tendon.

Irregular bone shape due to genetics or injury may affect how the cuff moves within the subacromial space and cause damage. Arthritis of the acromioclavicular joint may also cause a bony growth which also leads to tendon damage. Repetitive activities which involve overhead motions, lifting, throwing or catching often lead to tendon damage and shoulder pain, exacerbated by the natural age-related degeneration.

Damage may be traced to something as simple as posture problems. "I see people every week with 'shoulder pain' listed as the reason for the visit, and they come in with shoulders slouched and rolled in," says Kevin Gebke, MD, assistant professor of clinical family medicine. "Good posture has indeed become more difficult to maintain because we spend so much time working in a keyboard environment. The body just tends to roll forward."

He recommends people who spend a lot of time at the computer to break once per hour, tucking elbows toward back pockets, and holding the musculature contracture. "This not only activates those muscles, but strengthens them over time," says Dr. Gebke.

Comfortable chairs and recliners at home further aggravate the condition. When people sit with their backs curved and the neck craned forward, this position does not allow the body to work against gravity to maintain posture and strength.

Striving for good posture may present a manageable prevention strategy, but people don't always have control over even bigger risk factors. "If you have a manual labor job where you're spending the day lifting drywall over your head or operating a jackhammer, this activity takes its toll on your body," says Dr. Gebke. "The best recommendation is to minimize the overuse of shoulders, but obviously that's more difficult to accomplish in some occupations."

Maintaining a good balance of strength is also helpful. Sports medicine physicians often see swimmers with shoulder problems because the balance of their muscles has shifted to the front. Strong pectoral muscles pull the shoulders forward, while the back muscles stretch and grow weaker. Imbalance in shoulder muscles may also stretch the stabilizing ligaments and cause the tendons to impinge on the bone and become damaged. It is therefore important to balance and strengthen shoulders in the back as well as the front.

According to Dr. Gebke, women seem to be better about doing balance programs than men – especially young men. "At the health club I see young men doing lots of bench press and bicep work, but forgetting about the other muscle groups," he says. "They want to develop the muscles that show so they don't always work out in a balanced fashion. This sets them up for chronic injuries."

He recommends seated rows, reverse flies, light abduction and shoulder shrugs to strengthen the trapezius, rhomboids and scapular stabilizers that help with maintaining back strength and good posture. "And after you exercise any muscle, you need to stretch it out for 30 to 60 seconds," he adds.

In some cases a corticosteroid injection may be prescribed if tendonitis or bursitis is suspected, or if three to four weeks of other treatments have not proven effective. Overuse of this therapy, however, may impair the healing of injured tissue or hamper the success of surgery if that option becomes necessary.

In the case of chronic calcifying tendonitis some physicians are opting for ultrasound, which treats the problem by creating shock waves to destroy calcium deposits on the rotator cuff tendons. This is a relatively new treatment, and while initial studies demonstrate its effective in reducing pain and increasing range of motion, additional studies are necessary to confirm this as a long term treatment.

Ultrasound is also used for diagnosis. If ultrasound or MRI indicates a partial tear, the problem may still respond to conservative treatments such as activity modification to eliminate the source of irritation, anti-inflammatory medication, analgesics to control debilitating pain and allow healing sleep, and/or physical therapy to correct whatever biomechanical imbalance set up the patient for injury.

Traumatic damage resulting in a full thickness tear usually does require a surgical fix – if the patient is a candidate for surgery. An elderly female patient, for example, may not opt for surgery, especially if she can regain functionality with conservative treatment. On the other hand, a 25-year-old patient with a full thickness tear from a sports injury would almost certainly undergo a surgical repair for best results.

"The best thing we can do is encourage our patients to be as aware as possible," says Dr. Gebke. "It's amazing how we as humans have this immortality complex when we're young. But we only have one body, and if you wear something out it doesn't come back – you don't get issued another one. You simply have to take care of this one." ■