Archery Stretches and Flexibility Exercises

Archery stretching exercises to improve your performance and do away with archery injuries for good.

Archery is an ancient activity. It started out of necessity. Man was not fleet of foot enough to catch many of the protein rich creatures that scurried about. In order to get these creatures we had to develop a method to reach them from a distance. Throwing rocks and sticks at the animals worked, although it was often ineffective and difficult, and range was still limited. When someone finally strung a line (probably some form of animal innards or hide) between the two ends of a stick and launched another straight stick from it, archery was born.

If you're looking to improve your archery or just seeking to prevent archery injuries it is important to follow the information in this article. In addition, adding a few simple stretches to your fitness program will also help. To get started on a safe and effective stretching routine that's just right for you, check out the Ultimate Guide to Stretching & Flexibility.

Archery quickly found favor in warfare. It allowed armies to attack from greater distances and from hidden, and protected, locations. The equipment, and their uses, has changed over the centuries. Stone arrowheads have been found in Africa as early as 25,000 BC, with many speculating at its beginnings around 40,000 BC (although some of these "arrowheads" may have been spear tips.) The fire hardened arrow points, flint-tipped arrows, and feathered arrow shafts came on the scene a few thousand years later.

The early bows were smaller and made of flexible wood. It is believed that the draw weights were fairly light. Around 3500 BC, the Egyptians developed the first long bows. These were as tall as a man and were constructed of strong wood and horns. These, also, were the earliest composite bows.

The bow has gone through many changes, including the advent of the composite materials to make the bows stronger and more powerful. The long bow added range, as well as the ability to shoot multiple arrows at once. The crossbow added an additional dimension to archery. The downfall for archery came with the discovery of gunpowder and the rise in popularity of guns. The bow and arrow were not needed, in industrialized societies, for protection or survival. The gun gained prominence in the military for its destructive power and range. Military bowmen were replaced with sharpshooters.

Some countries still used archers in smaller numbers and positions even after the development of the gun. Kalmuck mounted archers gave Napoleon's troops a lot of trouble as they tried to invade Russia. The U.S. Army used a detachment of archers in several actions in Asia during World War Two.
Many kings in the 16th century tried to preserve the archery tradition by hosting tournaments, as part of large public festivals. They offered prizes to the winners. They even developed regulations and laws to protect archers. Archery groups were formed to support and protect archers, as well. This was the beginning of the sport of archery. It moved from a skill of necessity to a skill of sport.

The early English competitions spread to the colonies. Unlike some other sports, many peasants were skilled in archery. Bow hunting was still popular among poachers in the King’s forest. Early contests were simple target shooting contests.

There are three basic types of archery contests; target archery, with targets spaced at varying distances on a groomed field, clout archery, which involves shooting an arrow high into the air so it will come down on a target lying on the ground, and field archery, which simulates hunting, with targets of varying size and shape scattered about an non-groomed field.

Target archery is the version used in international and Olympic competition. It started in the Olympics in 1900 but quickly fell out of favor due to lack of international rules, so each Olympic year the rules changed according to the hosting country. In 1931, the Federation Internationale de Tir a l’Arc (FITA) was formed as the international governing body for archery. Then in 1972, after adoption of FITA rules by most countries, it was re-introduced into the Olympic Games.

**Anatomy Involved**
Archery does not require a great deal of cardiovascular conditioning, but it does require muscular endurance. The continuous drawing back of the bow string requires strength and endurance in the upper body. A strong core and lower body is essential for balance and control. Strong forearms will ensure proper aiming and a steady grip.

The major muscles used by the archer include:

- The muscles of the shoulder girdle; the latissimus dorsi, the teres major, and the deltoids.
- The muscles of the neck; the levator scapula and trapezius muscles.
- The core muscles; the rectus abdominus, obliques, and the spinal erectors.
- The muscles of the upper legs and hips; the gluteals, the hamstrings, and the quadriceps.

A good overall strengthening program to keep the muscles strong and flexible will keep the archer on target for a long time.

**Most Common Archery Injuries**
Archery is a non contact sport that does not subject the body to a lot of violent impact. With the exception of an errant bolt, there are very few dangers of traumatic injury for the archer. The repetitive motion involved in practice and competition does, however, put the archer at risk for repetitive strain injuries.
Although archery has a low reported incidence of injury associated with it, there is some risk. The archer may fall victim to rotator cuff injuries, tendonitis in the elbow, wrist, or shoulder, contusions, and impalement (although very rare.)

- **Rotator Cuff Injuries:** Due to the constant draw on the bow string, especially at high draw weights, the rotator cuff muscles are under constant strain. The action of holding the string back as the arrow is sited puts additional stress on these muscles. The muscles may become fatigued leading to the potential for strains. Pain in the shoulder, especially during the drawing action may be evident. Weakness and inability to lift and rotate the arm may also occur. This may be treated with rest, ice and the use on non-steroidal anti-inflammatory medication. In severe cases, or complete tears or resistance to treatment, surgical remediation may be required.

- **Tendonitis:** Tendonitis is caused by unusual or repetitive strain on the tendon. The constant strain placed on the tendons during archery can lead to tendonitis in the joints of the upper extremities, specifically the wrist, elbow, and shoulder. Pain in the attachment of the muscle, especially when the muscle flexes before warming up, may indicate tendonitis. The joint may be stiff and sore and the muscles may be weaker than usual. Rest and NSAIDs may be all that is required to treat tendonitis. Recovery time will vary depending on the severity of the condition, with an average three to six weeks.

- **Muscle Strains:** The muscles of the back, neck and shoulder are subjected to constant tension during archery and overtime, or when using a different bow, could be subject to a strain. The muscle fibers tear slightly during normal use, but when subjected to a load that is greater than their capacity more fibers may tear, causing pain and inflammation. The muscle will also be unable to handle large loads until it repairs. Pain within the muscle, inflammation, and stiffness may be evident with a strain. Rest, ice (for the first 72 hours), and anti-inflammatory medication will help manage the strain. Limited activity can be attempted as it is tolerated.

- **Contusion:** When the bow string is released it may slap along the forearm on the way back, this is called "String Slap." This can cause bruising where the string hits. The blood vessels under the string are broken due to the force of the string hitting the area and this causing bleeding under the skin. Slight swelling and discoloration will be present. Sharp pain will be felt immediately, then the pain becomes dull and usually only occurs with pressure on the area. Ice and protection will speed the recovery of the contusion.

**Injury Prevention Strategies**
The use of proper equipment and an overall conditioning program to prepare the muscles for repetitive use is essential for the archer.

- Proper use of arm guards and release devices will prevent "String Slap" and other potential injuries.
- Gradual increases in draw weight and repetitions during practice will ensure that the body is ready for the next step without shocking the muscles, helping to prevent strains.
- A good strengthening program for the upper body will prepare the muscles for the repetitive strain of drawing back the string and holding the position.
Flexibility is essential to aid in recovery and keeps the muscles ready each time they are called into play. A good overall stretching routine will also help prevent imbalances caused by constantly pulling the same way.

**The Top 3 Archery Stretches**

Stretching is one of the most under-utilized techniques for improving athletic performance, preventing sports injury and properly rehabilitating sprain and strain injury. Don't make the mistake of thinking that something as simple as stretching won't be effective. Below are 3 very beneficial stretches for archery; obviously there are a lot more, but these are a great place to start. Please make special note of the instructions beside each stretch.

**Arm-up Rotator Stretch:** Stand with your arm out and your forearm pointing upwards at 90 degrees. Place a broom stick in your hand and behind your elbow. With your other hand pull the bottom of the broom stick forward.

**Rotating Stomach Stretch:** Lie face down and bring your hands close to your shoulders. Keep your hips on the ground, look forward and rise up by straightening your arms. The slowly bend one arm and rotate that shoulder towards the ground.

**Assisted Reverse Chest Stretch:** Stand upright with your back towards a table or bench and place your hands on the edge. Bend your arms and slowly lower your entire body.

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**About the Author:** Brad is often referred to as the Stretch Coach and has even been called the Stretching Guru. Magazines such as Runners World, Bicycling, Triathlete, Swimming & Fitness, and Triathlon Sports have all featured his work.

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