

Get Healthy, Stay Healthy

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with Kinetic Health

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Treating Bunions

By: Dr. Brian Abelson DC.



Bunions (*Hallus Abducto Valgus*) are a common foot problem that affects the joint at the base of the big toe (first *metatarsophalangeal joint*). In Latin “bunion” means enlargement, while “*hallus abducto valgus* (HAV)” refers to a bending inwards of the big toe as seen on the image. As you see, the big toe bends in towards the other toes while the bone behind it (1st metatarsal) pushes outward. This creates a considerable amount of stress on



the joint (*first metatarsophalangeal joint*). Due to this bending inwards, a sharp angle at the big toe joint is created, resulting in the formation of a bunion. Initially, this enlargement is composed of swollen tissue which becomes irritated by any external pressure (for example tight shoes). Eventually this swollen tissue thickens to form a very large lump or bunion.

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Torn Biceps Muscle at the Shoulder

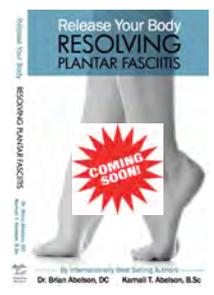
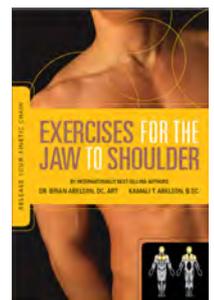
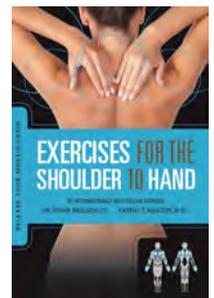
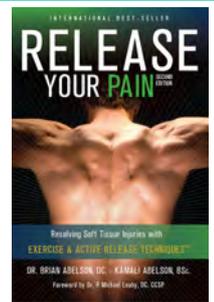
By: Dr. Evangelos Mylonas DC.



Now that winter is upon us, it isn't uncommon to see patients in the clinic complaining of shoulder pain after shoveling snow or playing hockey. One of the muscles commonly injured at the shoulder is the *biceps*. At first it may seem counterintuitive that the *biceps* is involved in shoulder complaints, but when we look at the anatomy it becomes clear that an injury to the *biceps tendon* at the shoulder may be accompanied by, or contribute to the development of common shoulder conditions such as *shoulder impingement*, *tendonitis*, and *rotator cuff injuries*.

As the name implies in Latin, the *biceps* or specifically the *biceps brachii*, is a “two-headed muscle of the arm” consisting of a long head and a short head. It is located on the front of the upper arm between the shoulder and the elbow and its tendons cross both joints. At the shoulder the *biceps* muscle attaches via two separate tendons. The long head travels across the shoulder joint (the shoulder joint is considered a *ball-and-socket joint*) and inserts directly into the top of the “socket” area of the joint known as the *supraglenoid tubercle*. The short head inserts onto a bony prominence on the front of your shoulder blade called the *coracoid process*. At the elbow the *biceps* inserts onto the bones of the forearm (*ulna* and *radius*) and is firmly anchored there by way of deep fascial connections.

The primary actions of the *biceps* muscle are to bend your arm (flexion) and turn your forearm outward (supination) at the elbow. It also acts as a shoulder flexor to some degree and helps to stabilize the shoulder joint via its tendinous attachments. Article continued on page - 3



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Resolving Bunions (continued)



There is an obvious relationship between bunions and shoes, since bunions do not occur in cultures that go barefoot. High heels, pointed shoes, ballet shoes, excessively tight shoes, and even cowboy boots often lead to the development of bunions.

Anatomy and Biomechanics

From a biomechanical perspective, bunion formation creates a cycle of dysfunction. As the bone behind the big toe (1st metatarsal bone) moves

outwards, the inner arch of the foot becomes unstable and starts to collapse. This instability, or lack of support in the arch, increases stress on the angle at the point where the bunion is forming. This stress accelerates the formation of the bunion, which in turn further destabilizes the arch of the foot. To truly deal with this problem, you must address both the foot instability and joint angle.

In addition to the stresses caused by poor shoes, simply walking with your feet in a "turned out" position can also lead to bunion formation from the stress it puts on two particular muscles, the *adductor hallucis* and the *abductor hallucis*.

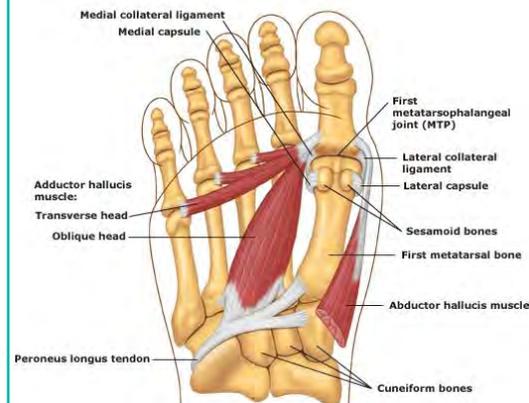
The *adductor hallucis* is an interesting muscle which is shaped like the number seven. The *adductor hallucis* transverses from several of the lateral toes into your big toe. When the *adductor hallucis* **contracts**, it pulls the big toe towards the 2nd toe. When the *adductor hallucis* muscle becomes tight and restricted, it continually pulls the big toe towards the second toe (even without contracting). The *adductor hallucis* tends to become restricted in individuals who excessively pronate or walk with their feet turned outwards (a huge percentage of runners and dancers).

This pulling action of the *adductor hallucis* disrupts a key balance in muscle tension, which normally keeps the big toe in a neutral or straight position. This balance occurs between the *adductor hallucis* and the *abductor hallucis* muscles. The *abductor hallucis* normally resists the pulling action of the *adductor hallucis*. The *abductor hallucis* runs from your heel (*calcaneus*) to your big toe (*proximal phalanx*). Constant pulling from the *adductor hallucis* weakens and overstretches the *abductor hallucis*. Without the appropriate counter-balancing action of the *abductor hallucis*, the big toe moves inward, and bunion formation accelerates.

Treatment

The objective of non-surgical treatment is to prevent the progression of the bunion by correcting the biomechanical stress on the foot, by realigning the joint as much as possible, and by increasing the intrinsic strength of the foot. We achieve this by using soft-tissue techniques such as Active Release Techniques to break adhesions that form in the *adductor hallucis* muscle or other affected structures. We use **taping** help bring the big toe back into a neutral position. We have our patients perform a series of strengthening, stretching, and self-myofascial release exercises. The selection of exercises will vary greatly between different patients, and is dependant on which areas of their kinetic chain has been affected.

If you would like more information, or would like help with your bunions then just give us a call at 403-241-3772



Taping a Bunion

Bunion taping can help reduce pain and discomfort of a bunion by helping to realign the joint taking pressure off the bunion.
<http://youtu.be/WHoXgXZL718>



Exercise examples:

The following two exercises are examples of exercises that we recommend for Bunions. Please note, this is just a sample of our exercises, the actual exercise routine will vary depending on each individual case.



Increasing Dorsi Flexion

A decrease in dorsi-flexion causes excessive pronation of the foot, the knee to move in (knee valgus), and internal rotation of the the leg (femur).
<http://youtu.be/UVcS6kP5aPc>



Increasing Big Toe Mobility
Having mobility in the joints of the big toe is essential for normal gait.

Torn Biceps Muscle at the Shoulder (Continued)

Ninety percent of biceps tears happen at the shoulder as compared to the elbow. Statistically you have a greater chance of straining your *biceps* if you are older than 40, perform heavy or repetitive overhead activities, are a smoker and use or have used corticosteroid medications. All of these factors contribute to the wearing down and fraying of the *biceps tendon* slowly over time.



The two most common causes of a *biceps tendon* strain at the shoulder are:

- Injury or Trauma – falling on an outstretched arm a sudden increased load on the *biceps tendon* (during heavy lifting at work or during resistance training at the gym) can cause an acute *biceps* strain.
- Repetitive Strain – gradual wear and tear of the *biceps tendon* can occur with overuse during work and daily activities and can lead to a *biceps* tear. Repetitive overhead activities (e.g. swimming, racket sports) place more stress on the *biceps tendon* and can lead to strains or ruptures, especially if the tendon has been weakened over time.

Symptoms of a torn biceps at the shoulder:

- Sudden sharp pain in the shoulder and upper arm.
- Possible snapping or popping sound.
- Weakness in the shoulder and upper arm.
- A bulge in the upper arm above the elbow
- An Indentation close to the shoulder.
- Bruising from the upper arm to the elbow.
- Difficulty bending the elbow and rotating the palm up.

Strains of the biceps muscle and tendon can be categorized broadly into two groups, partial tears and complete tears. A partial tear will respond well to conservative care (e.g. rest, ice, gentle movement, functional rehabilitative exercises, and soft-tissue therapies) and will usually heal within six to eight weeks. If there is a visible defect in the biceps (a bulge or dent) this can be indicative of a complete tear or rupture and you should consult with your medical doctor. A complete tear needs to be surgically repaired.

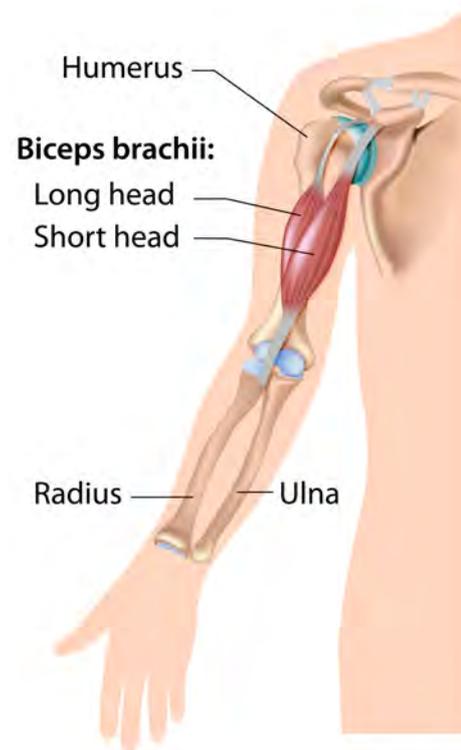
If you are suffering from shoulder pain or suspect that you have injured your *biceps* muscle/tendon, then please feel free to contact us at the clinic. We strive to provide all our patients with a clear and comprehensive understanding about what their condition is and how they can achieve the results they want. We work together with our patients as a team, guiding them throughout the different phases of their care, so that they can recover quickly and pursue whatever activity or sport that they are passionate about. If you would like more information about treating this or other conditions, or would like to book an appointment, just give us a call at the clinic

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Exercise...

An example of an exercise we may prescribe for a torn biceps muscle would be the Internal-External Shoulder Stretch. (From the book *Exercises for the Shoulder to Hand*).



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www.activerelease.ca

This popular site is dedicated to providing you with information about one of the most effective and popular treatment methods we use in our clinical practice - **Active Release Techniques (ART)**. We bring extensive expertise in ART. Dr. Abelson was an instructor in ART for over 10 years, has co-authored the international best-seller about ART "**Release Your Pain**", and contributed to the **ART Biomechanics Manuals** that are currently used to instruct ART practitioners. Both Dr. Abelson and Dr. Mylonas are fully certified in all ART techniques.



www.youtube.com/kinetichealthonline

This is the link to our **YouTube** channel. We are constantly updating our channel with videos about new exercises, conditions, biomechanical analysis, local races (marathons, triathlon's), and even cultural events and travel. Please check us out, and feel free to *share* our videos with anyone that you think could use this information.



www.kinetichealthcalgary.blogspot.ca

This is Dr. Abelson's blog, in which he shares his perspectives, opinions, and knowledge about a wide array of health conditions. If you have a specific health condition that you would like Dr. Abelson to cover in his blog, please send an email to kinetichealth@shaw.ca. If it is an issue than he has not already covered, he will do his best to cover the subject in a future blog. If it is a subject he has already written about, we will send you the link to that blog.



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