

*Surgical & Non-Surgical Care. Sports Medicine. Physical Therapy.***Volume 8, Issue 8, March 2017**

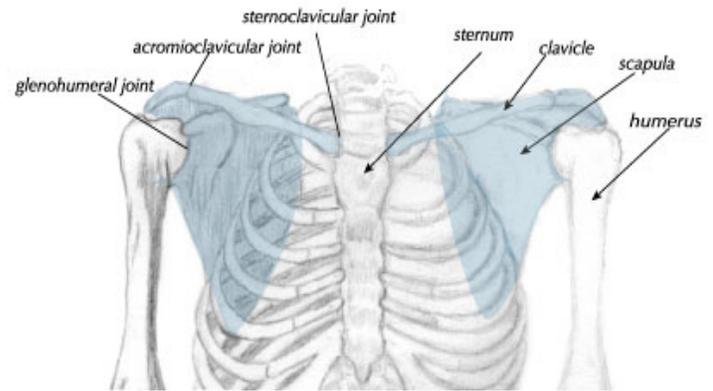
EXAMINATION OF THE **SPINE AND EXTREMITIES: THE SHOULDER (Part 1)**

Beginning in January of 2016, we began a series of newsletters examining the spine and the extremities one joint/region at a time. Beginning with the foot and working our way upward, the "Examination of the Spine and Extremities Series" is designed to provide a brief overview of the anatomy of each respective joint, an underlying review of its motion and dynamics, and likewise provide an explanation of some of the more common pathologies experienced in that particular joint.

Bones: Clavicle, Scapula, and Humerus

Ligaments: Sternoclavicular jt (3)
Acromioclavicular jt (3)
Glenohumeral jt (3)

Muscles: Pec Major, Pec Minor, Lat. Dorsi, Deltoid (3), Biceps, Rotator Cuff (4) Triceps



Physiology:

The shoulder complex is comprised of 4 major joints:

Sternoclavicular: The juncture of the clavicle into the sternum. The SC joint serves as the "anchor" joint where the entire shoulder complex attaches onto the axial skeleton.

Acromioclavicular: The joining of the clavicle and the acromion process of the Scapula. The AC joint is a well-stabilized joint that is often injured when one falls on the tip of the shoulder

Glenohumeral: The ball and socket joint that is commonly referred to as the Shoulder. This joint exhibits extensive motion in all three planes.

Scapulothoracic: Technically speaking, the scapulothoracic joint is not a true joint in the fact that the scapula is not directly attached to the posterior thoracic cage (i.e. ribs) by any ligamentous tissue. Instead, this joint is stabilized and mobilized by several muscles which are responsible for keeping the scapula in its ideal position during movement at the glenohumeral joint.

ON-SITE ORTHOPEDIC CLINICS EACH WEEK

- No Charge
- Open to patients of all ages
- Appointments (918) 346-7800

Collinsville Public Schools
Monday/Wednesday
2:00pm—3:30pm

Coweta Public Schools
Wednesday
2:45pm—3:30pm

Edison Preparatory School
Monday/Thursday
2:45pm—3:30pm

Glenpool Public Schools
Tuesday
2:45pm—3:30pm

Kellyville Public Schools
Wednesday
Noon—12:45pm

Regent Preparatory School
Wednesday
Noon—12:45pm

Rejoice Christian School
Monday/Wednesday
2:00pm—3:30pm

Victory Christian School
Tuesday
2:45pm—3:30pm

Wagoner Public Schools
Wednesday
2:45pm—3:30pm

*Hosted by CSO
Athletic Trainers and
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Clavicle Fractures

As one of the most commonly fractured bones in the human body, the clavicle accounts for 5% of all adult fractures according to the American Academy of Orthopedic Surgeons. Most often caused by a fall or direct impact, clavicle fractures are usually exceedingly painful and they significantly limit the motion of the shoulder. As you may recall, on page 1 we discussed that the clavicle is the only bone-to-bone stabilizer of the entire shoulder complex, connecting the sternum to the scapula. Therefore, once the clavicle is fractured, the shoulder joint is literally now disconnected from the axial skeleton and the positioning and functioning of the entire shoulder joint must be now managed.

Generally speaking, the average clavicle fracture only requires support and positioning to heal, usually requiring about 8-12 weeks. This support is usually in the form of a figure-of-8 brace with the occasional addition of a shoulder sling as well. By holding the shoulder blade back and up, the clavicle is placed in an ideal position for the fracture to heal.

However, there are many complications where a broken clavicle would need to be surgically repaired. Position (i.e. alignment and approximation) and fragmentation are two very common reasons why clavicle fractures would warrant surgical repair. For example, if the two bone fragments are more than 15 degrees out of alignment or if they are significantly overlapped, surgical repair is ideal to ensure for the correction of both complications. Likewise, if the bone has fractured into multiple pieces, the need for surgical fixation is more likely.

Either way, most clavicle fractures heal over time and most don't require surgery. However, given the fact that the clavicle is the single bony stabilizer of the entire shoulder complex, it is always ideal to have an orthopedist evaluate this condition to make sure the bone heals properly and that shoulder motion and strength are not permanently hindered.

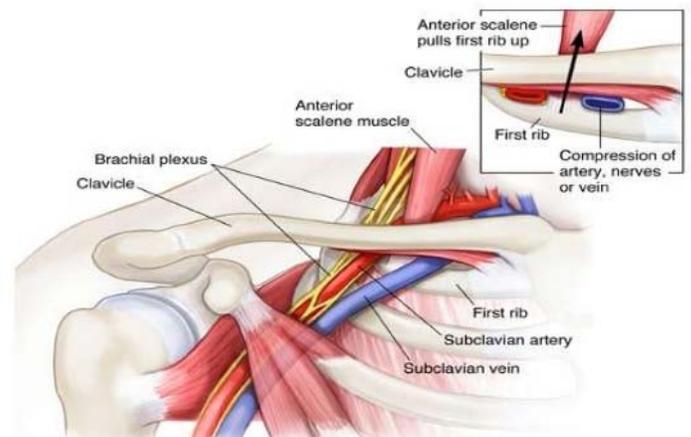
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Thoracic Outlet Syndrome

Created by the spacing between the first rib and the clavicle, the thoracic outlet serves as the exit portal by which the subclavian artery, vein, and several nerves leave the axial skeleton and proceed into the upper extremity. Thoracic Outlet Syndrome occurs when the thoracic outlet is narrowed, thus impinging on the neurovascular structures and causing downstream neurovascular complications such as decreased blood flow and/or decreased sensation (i.e. numbness).



Congenital:

Congenital narrowing of the thoracic outlet is very difficult to overcome. As the anatomical spacing doesn't provide enough room for the neurovascular structures, surgically altering the anatomy is the predominant option to correct the condition.

Acquired:

Acquired thoracic outlet syndrome often comes from an overdevelopment or tightening of the musculature in the chest and shoulder. As such, an acquired thoracic syndrome, when properly diagnosed, is often effectively addressed with rest, a supervised rehabilitation program, and a progressive return to activity.

Main Clinic

6585 S. Yale Ave., Ste. 200
Tulsa, Oklahoma 74136
918-481-2767

Bixby Clinic

12800 S. Memorial, Ste. D
Bixby, Oklahoma 74008
918-394-2767

South Tulsa Clinic

9716 S. Riverside Dr., Ste. 110
Tulsa, Oklahoma 74137
918-528-3300

Owasso Clinic

13616 E. 103rd St. N., Ste. B
Owasso, Oklahoma 74055
918-272-4488

Downtown Clinic

802 S. Jackson, Ste. 405
Tulsa, Oklahoma 74127
918-583-4400

Hillcrest South Medical Plaza

8803 S. 101st E. Ave, Ste. 300
Tulsa, OK 74133
918-994-6277