Speaker: Heidi Peterson

Welcome again to Human Anatomy Lab. We just covered the axial skeleton. Welcome to your next section of your bone lab called the appendicular shoulder girdle and arm. Same deal you are going to see lots of bones and lots of features and markings.

We are going to start out with the shoulder girdle. And part of the shoulder girdle is the scapula. The first bone we are going to look at is the scapula. On an anterior view you are going to see the coracoid process and the acromion process. The coracoid process is to me looking a little bit like a diving board. While the acromion process looks like a big platform diving board. In the posterior view of the scapula you will see again the acromion process which comes right off the spine of the scapula. The bone looks a little bit backwards but you have to remember that if it was flipped the other way your arms would be come out of the middle of your back and not your sides. So the posterior view we can see the acromion process and the spine. Just like in the skull we are going to see lots of views with maybe more than one feature labelled in each view. In the lateral view it is really easy to see the coracoid process the little tiny one, and then the bigger one which is the acromion process. Right between the two is the pool, which is why I used the diving board analogy, the pool is called the glenoid cavity. It is where the head of the humerus fits.

The next part of the shoulder girdle is the clavicle itself. You might know it as the collar bone. But again clavicle is the correct answer on the test.

Fitting into that shoulder girdle is the humerus. In a posterior view of the humerus you want to know where it’s location is if you can find a landmark on a bone and then find the other markings and features around it makes for easier studying. The two landmarks you will see on the humerus is the distal end where you see the nice round part of the humerus and the proximal end. You might also know that as your elbow. That along with the ulna makes up that appendage. So the humerus itself has many features. The nice round feature you see at the distal end is the head of the humerus. That head of the humerus has the rotator cuff around it. And it fits into the glenoid cavity. In the anterior view even more pictures show up. We have the anterior view with the lesser tubercle. And the lesser in anatomical usually means littler but it also means more inferior. If you look at the lesser tubercle on one side and the greater tubercle on the other, you can actually see that the greater is bigger and sits up a little higher. They are easy to find on the bone, because it is right where your deltoid comes in. And it is actually the deltoid tendon that comes down through the greater and lesser tubercle and attaches itself to something called the deltoid tuberosity.

So on the distal end of the bone, we had the lesser and greater tubercle on the proximal end of the bone is the trochlea and the trochlea looks like a spool shaped and it is actually on the medial side of the bone. On the lateral side of the proximal end you will see capitulum. You put your hat or cap on your head and the cap or capitulum is round just like your head. So, on the humerus we have the lesser tubercle, the greater tubercle, the deltoid tuberosity which is insertion for the deltoid tendon right in
the middle on the shaft of the humerus. And on the proximal end, we have the trochea shaped like a spool because the head of the ulna fits in it and the capitulum shaped round or sphere like because the head of the radius that fits in it. It will be obvious once we look at the ulna and radius why those two features or markings are shaped the way they are.

When we look at the radius the first thing you will notice up at the top is a nice round flat area. It is called the head of the radius. And I always think it looks a little bit like the head of a horse’s hoof if you were to turn that bone inferior. Right under the head of the radius you will find a bump or a raised roughened projection. That is called the radial tuberosity. And at the very bottom of the radius you find again a sharp pointy piece of bone called a styloid process.

The next bone that makes up your forearm is your ulna. One of the things to remember about the radius as opposed to the ulna is that your radius is found on your thumb side and the ulna is found on your pinky side. Or if you want to be correct the radius is found on your first digit and the ulna leads to your fifth digit. The ulna to me has always looked like a dinosaur. And if you look at the dinosaur’s head its top jaw is called the olecranon process, the olecranon process. Right under the distal end of that bone you will see another styloid process. If you want to find the landmarks on your own body, these are the bones on either side your wrist that stick out so you can kind of feel for them if you want, trace your ulna and radius down those two bumps, don’t push on them too hard, cuz remember anything around a styloid process contains a nerve and you will feel the pain. So on the ulna, the olecranon process which is the bump on your elbow, the styloid process is the sharp pointy piece on the distal end.

Hanging off your forearm is the hand. We are going to look at two views; a posterior and an anterior view. The posterior view of the hand means that the hand is down if you were to look at your hand you would put it palm down on the table and it should look like the picture, if it is your right hand because that is what you are looking at. In your fingers are three phalanges, they are called distal, intermediate, and proximal but if we give you the test question then you just have to know them as the phalanges. Not circled is the top two phalanges on the thumb so do not neglect to know those are also phalanges. If you look at the palm of your hand you will the metacarpals. Meta for middle and I remember it because you drive a car with your hands so in your hands you will find the metacarpals. Then comes the confusing part of the hand. It is not too confusing if you follow along and use the acronym. The acronym we like to use and the one you find in your notes is Some Lovers Try Positions That They Can’t Handle. That stands for 8 carpals. Scaphoid, Lunate, Triquetrum, Pisiform, Trapezium, Trapezoid, Capitate, Hamate. The first one you will see in the proximal row is the Scaphoid, followed by the lunate, half moon shaped the reason for Luna in its name the triquetrum, TRI-que-trum and the little one that hangs off is the pisiform. Second row or distal row. Right under the thumb the reason we can swing on a trapeze is because of the trapezium that allows your thumb to have something called opposition or free motion, next to the trapezium if you fall off you get a weird shaped head trapezoid shaped that’s the trapezoid. And right next to the trapezoid is the capitate under your third digit and under the fourth and fifth digit is the hamate. So again, phalanges are fingers, metacarpals in your palm, and then the 8 carpals. Some lovers try positions they can’t handle. Scaphoid, lunate, triquetrum, pisiform, trapezium, trapezoid, capitate, and hamate.
We are going to start again with all of those things we just talked about on the anterior view of the hand. Again you can see the phalanges where your fingers are in the middle the metacarpals and then the scaphoid, the lunate, and the pisiform, the reason I didn’t say the triquetrum is because the pisiform actually looks like it sits right on top of there. Then we go to the distal row where we start again right under the thumb the trapezium, trapezoid, capitate and under your fourth and fifth digit the hamate. And if you zoom in on the hamate you will see a little hook, it is called the hook of the hamate it is a good landmark to know what you are looking at. You will see the hand and feet together. It is called articulated. So you will not ever see a carpal on its own.

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