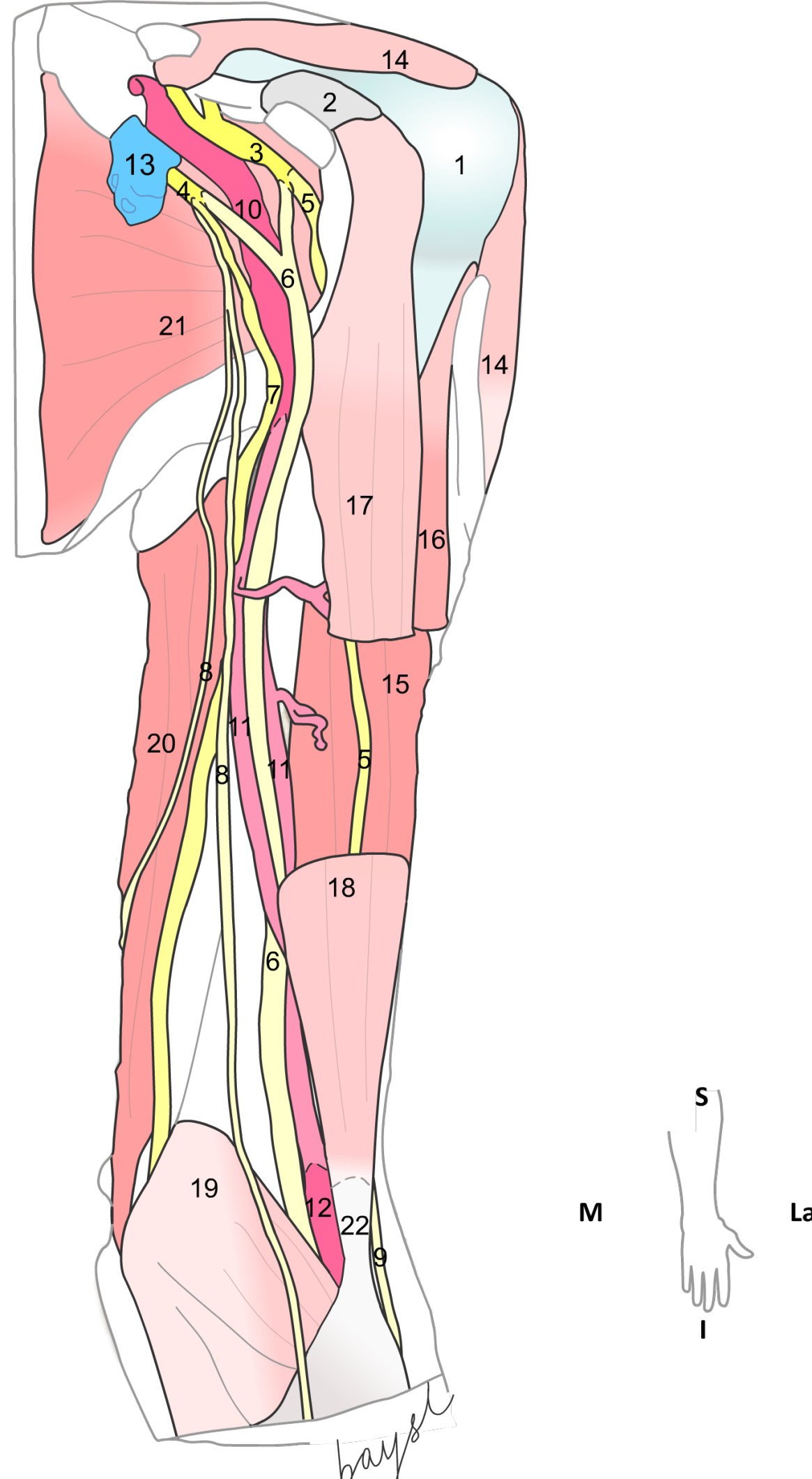


BRACHIUM (ANATOMY OF THE ARM)



Anterior view of the muscles and nerves in the arm.

	1.	Fibrous capsule
	2.	Coracoid process
Nerves	3.	Lateral cord
	4.	Medial cord
	5.	Musculocutaneous nerve
	6.	Median nerve
	7.	Ulnar nerve
Arteries	8.	Medial cutaneous nerve of forearm
	9.	Lateral cutaneous nerve of forearm
	10.	Axillary artery
	11.	Brachial artery
	12.	Ulnar artery
Muscles	13.	Axillary vein
	14.	Deltoid
	15.	Brachialis
	16.	Biceps brachii (long head)
	17.	Biceps brachii (short head)
	18.	Biceps brachii
	19.	Superficial flexors of forearm
	20.	Triceps brachii
	21.	Subscapularis
	22.	Bicipital aponeurosis

The biceps brachii muscle has two heads which originate from the scapula. The long head originates from the supraglenoid tubercle, while the short head originates from the coracoid process. Both heads of the biceps brachii muscle insert into the radial tuberosity and fascia of the forearm to allow for supination of the forearm and flexion of the arm at the shoulder and elbow joints.

Derived from nerve roots C5, C6, and C7 the musculocutaneous nerve can also be observed in this region of the arm. It innervates the muscles in the anterior compartment of the arm to allow for motor functions. The musculocutaneous nerve also innervates the lateral forearm, allowing for sensory function by way of the lateral cutaneous nerve.

Containing nerve fibres from C8, and T1, the ulnar nerve is a continuation of the medial cord of the brachial plexus and it provides motor innervation. It innervates the muscles in the anterior compartment of the forearm, the medial palm, and the dorsal surface of the medial one and a half fingers.

With nerve fibres from C6 – T1, the median nerve is derived from the medial and lateral cords of the brachial plexus. It gives off an anterior interosseous and a palmar cutaneous branch in the forearm. It provides motor innervation to most of the muscles in the anterior forearm and in the hands. The median nerve also provides sensory cutaneous innervation to hands.

The arteries that supply the arm include:

1. Axillary artery
2. Brachial artery
3. Ulnar artery

The main venous drainage of the arm is by the axillary vein.

CLINICAL CORRELATION

Musculocutaneous nerve injury – this may occur as a result of trauma to the region of the axilla. In the event of injury to this nerve, motor functions of the muscles in the anterior compartment of the arm (biceps brachii, brachialis, and coracobrachialis) may be compromised. Depending on the severity of the injury, this may include weakened motor functions of the muscles as well as loss of sensation in the lateral forearm.

Median nerve compression – also known as Carpal Tunnel Syndrome (CTS), this occurs when the median nerve is compressed within the carpal tunnel. CTS can result in numbness, or pain in the regions innervated by the median nerve.

Question(s)

- Discuss the structures innervated by the musculocutaneous nerve.
- Describe the main functions of the biceps brachii muscle.
- Describe the contents of the carpal tunnel.