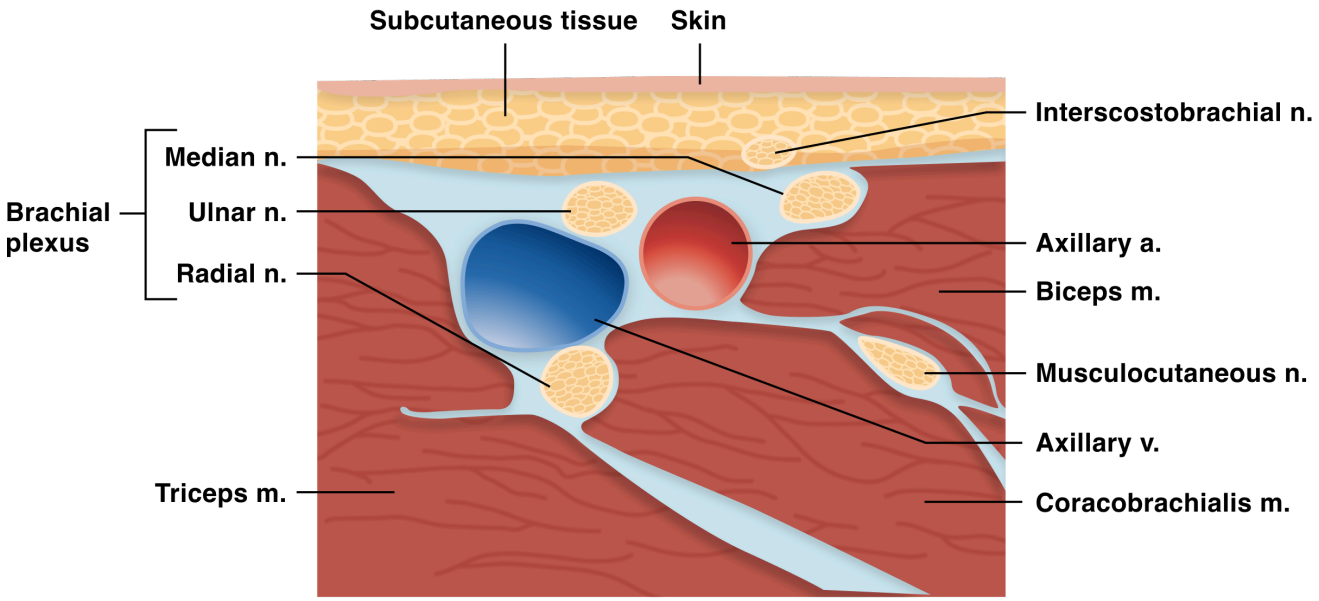
Axillary Nerve Block Anatomy Diagram

The axillary brachial plexus block is a vital regional anesthesia technique, particularly for surgeries involving the upper limb, such as the elbow, forearm, and hand. This procedure specifically targets the terminal branches of the brachial plexus within the axilla, ensuring comprehensive analgesia and anesthesia.



Brainkar. (n.d.). Upper extremity peripheral nerve blocks: Axillary block. Retrieved June 12, 2024, from https://www.brainkart.com/article/Upper-Extremity-Peripheral-Nerve-Blocks--Axillary-Block_27238/

Axillary artery: The axillary artery is the central landmark in the axillary region, around which the nerves of the brachial plexus are positioned. This artery extends from the lateral border of the first rib to the lower border of the teres major muscle. During the axillary nerve block, the artery serves as a guide for identifying the locations of the surrounding nerves.

Median nerve: The median nerve is typically located anteromedially to the axillary artery. It is formed by the lateral and medial cords of the brachial plexus and travels down the arm to supply motor and sensory functions to parts of the hand. In the context of the block, identifying this nerve is crucial for providing effective anesthesia to the corresponding regions of the arm.

Ulnar nerve: The ulnar nerve is found posteromedially relative to the axillary artery. Originating from the medial cord of the brachial plexus, this nerve extends down the arm and into the hand, providing sensory and motor innervation. Proper identification and blockade of the ulnar nerve are important for surgeries involving the inner aspect of the arm and hand.

Radial nerve: Positioned posteriorly to the axillary artery, the radial nerve arises from the posterior cord of the brachial plexus. It travels along the posterior aspect of the arm, supplying muscles involved in extending the elbow, wrist, and fingers, as well as providing sensory input from the back of the hand. Accurate identification of the radial nerve is essential for procedures requiring anesthesia of the posterior arm and hand.

Musculocutaneous nerve: The musculocutaneous nerve is located laterally to the axillary artery, often within the coracobrachialis muscle. This nerve originates from the lateral cord of the brachial plexus and supplies motor functions to the anterior muscles of the arm (biceps brachii, brachialis, and coracobrachialis) and sensory functions to the lateral forearm. Proper blockade of this nerve is necessary for procedures involving the anterior upper arm.

Notes:

Understanding the anatomy ensures effective pain management for procedures involving the shoulder, upper arm, and lateral aspect of the forearm. An accurate axillary nerve block can provide targeted anesthesia, reducing the need for systemic pain medications and their associated side effects.