

Figure 12.2

bifurcates into the radial and ulnar arteries at the level of the radial neck (Fig. 12.2). It is accompanied along its course by two interconnected venae comitantes, which are large enough to be used as recipient veins in microvascular reconstruction. The artery lies under the deep fascia of the arm and is easily palpable along its course commencing anteromedial to the triceps in the upper arm, gradually becoming more anterior to lie along the brachialis

muscle, and eventually medial to the biceps. Its final position is anteromedial to the elbow joint, where it runs under the bicipital aponeurosis (lacertus fibrosis), entering the forearm superficial and medial to the biceps tendon (Fig. 12.4).

In the proximal arm the brachial artery is surrounded by the terminal branches of the brachial plexus (Fig. 12.5). An appreciation of these neurovascular relationships

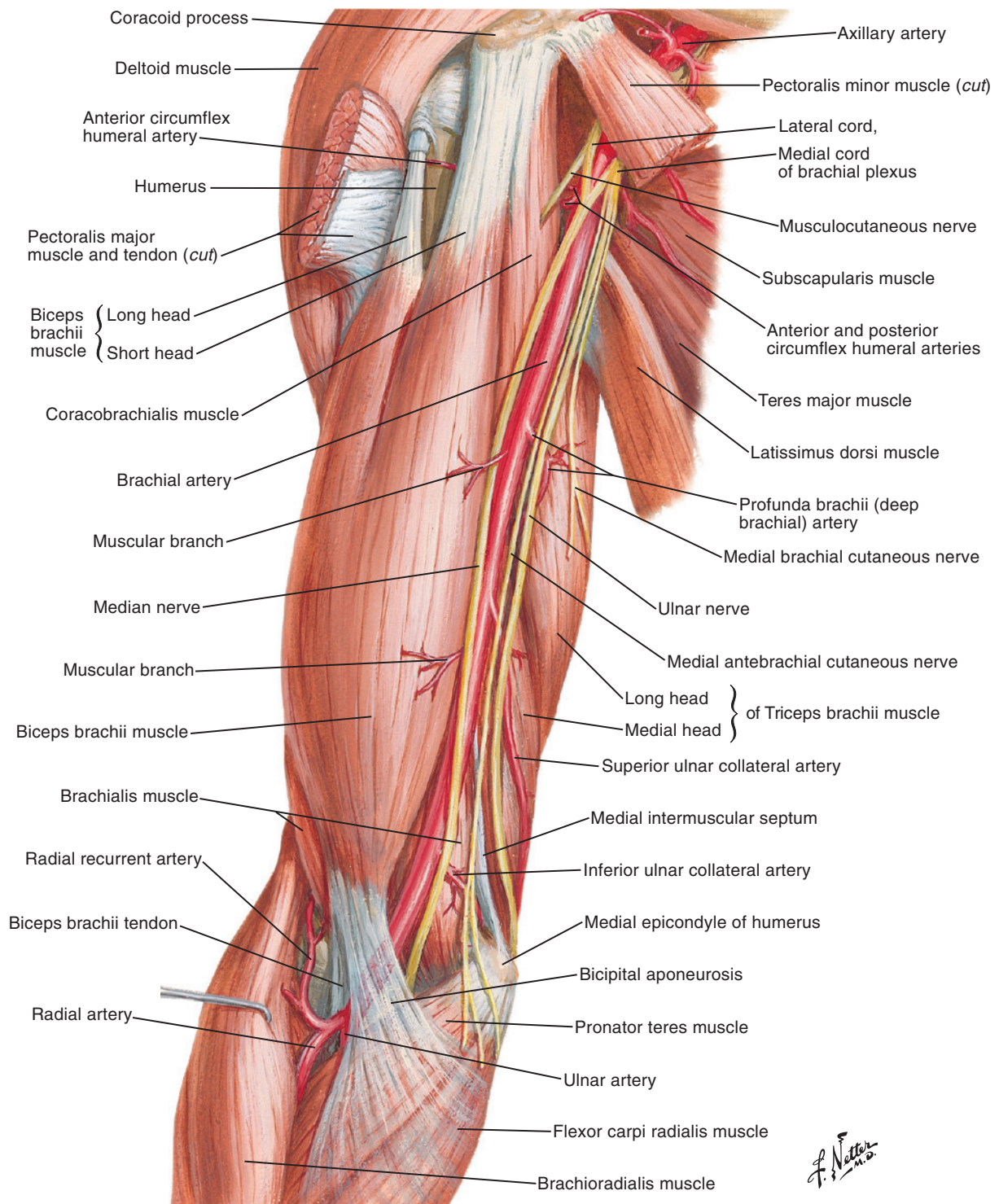


Figure 12.3 Brachial artery and medial arm. (Reprinted from Netter Anatomy Illustration Collection. ©Elsevier Inc. All Rights Reserved.)

is necessary to avoid intraoperative nerve injuries in recipient vessel exposure, and is also useful when performing complex peripheral nerve reconstruction and nerve transfers.

Along its entire course, the brachial artery remains intimately related to the median nerve. Proximally, the median nerve lies anterior to the artery but crosses it to lie medial to the brachial artery in the distal arm (Fig. 12.3).

The ulnar nerve is initially found medial to the brachial artery in the proximal arm, along with the medial antebrachial cutaneous nerves. As the brachial artery gradually courses in an anterior direction towards the antecubital fossa, the ulnar nerve heads posteriorly away from the artery, piercing the medial intermuscular septum half way down the arm to enter the posterior compartment of the arm medial to the triceps (Fig. 12.2). It eventually lies posterior