

Nerves

I. Brachial plexus (from ventral rami of spinal nerves C5–T1)

A. Roots

1. C5

a. Dorsal scapular nerve

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the levator scapulae & rhomboid muscles

b. Long thoracic nerve

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the serratus anterior muscle

2. C6

a. Long thoracic nerve (see above)

3. C7

a. Long thoracic nerve (see above)

4. C8

5. T1

B. Trunks

1. Upper trunk (C5–6)

a. Nerve to subclavius

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the subclavius muscle

b. Suprascapular nerve (C5–6)

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the supraspinatus & infraspinatus muscles

2. Middle trunk (C7)

3. Lower trunk (C8–T1)

C. Divisions

1. Anterior

2. Posterior

D. Cords

1. Lateral

a. Lateral pectoral nerve

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the pectoralis major & minor muscles

b. Musculocutaneous nerve

i. Muscular branches

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the biceps, coracobrachialis & brachialis muscles

ii. Lateral cutaneous nerve of the forearm

function – sensory & postganglionic sympathetic innervation of the skin overlying the lateral aspect of the forearm

c. Lateral root of the median nerve

i. Muscular branches in the forearm

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the flexor carpi radialis, palmaris longus, flexor digitorum superficialis, pronator teres, flexor pollicis longus, flexor digitorum profundus & pronator quadratus muscles

ii. Palmar cutaneous branch

function – sensory & postganglionic sympathetic innervation of the skin overlying the radial aspect of the palm of the hand

iii. Muscular branches in the hand

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the lateral two lumbrical muscles

iv. Recurrent branch of the median nerve (C8–T1)

function – sensory, postganglionic sympathetic & motor (lmm) innervation of the flexor pollicis brevis, abductor pollicis brevis & opponens pollicis muscles

v. Palmar digital branches

function – sensory & postganglionic sympathetic innervation of the skin overlying digits 1–4

2. Medial cord

- a. Medial pectoral nerve
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the pectoralis major & minor muscles
- b. Medial cutaneous nerve of arm
function – sensory & postganglionic sympathetic innervation of the skin overlying the medial aspect of the arm
- c. Medial cutaneous nerve of the forearm
function – sensory & postganglionic sympathetic innervation of the skin overlying the medial aspect of the forearm
- d. Medial root of the median nerve (see above)
- e. Ulnar nerve
 - i. Muscular branches in the forearm
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the flexor carpi ulnaris & flexor digitorum profundus muscles
 - ii. Palmar cutaneous branch
function – sensory & postganglionic sympathetic innervation of the skin overlying the ulnar side of the palm
 - iii. Superficial terminal branch
function – sensory & postganglionic sympathetic innervation of the skin overlying the palmar surfaces of digits 4 & 5
 - iv. Deep branch of the ulnar nerve (C8–T1)
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the abductor digiti minimi, flexor digiti minimi, flexor pollicis brevis, opponens digiti minimi, palmar interossei, dorsal interossei, medial two lumbricals & adductor pollicis muscles

3. Posterior cord

- a. Upper subscapular nerve
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the subscapularis muscle
- b. Thoracodorsal nerve
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the latissimus dorsi muscle
- c. Lower subscapular nerve
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the subscapularis & teres major muscles
- d. Axillary nerve (C5–6)
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the deltoid & teres minor muscles
- e. Upper lateral cutaneous nerve of arm
function – sensory & postganglionic sympathetic innervation of the skin overlying the deltoid muscle
- f. Radial nerve
 - i. Muscular branches in the arm
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the triceps & brachialis muscles
 - ii. Muscular branches (deep and posterior interosseous) in the forearm
function – sensory, postganglionic sympathetic & motor (lmm) innervation of the brachioradialis, extensor carpi radialis longus, extensor carpi radialis brevis, extensor carpi ulnaris, extensor digitorum, extensor digiti minimi, extensor indices, extensor pollicis brevis, extensor pollicis longus & abductor pollicis longus muscles
 - iii. Posterior cutaneous nerve of the arm
function – sensory & postganglionic sympathetic innervation of the skin overlying the posterior aspect of the arm
 - iv. Posterior cutaneous nerve of the forearm
function – sensory & postganglionic sympathetic innervation of the skin overlying the posterior aspect of the distal arm & posterior aspect of the forearm
 - v. Superficial terminal branch
function – sensory & postganglionic sympathetic innervation of the skin overlying the radial side of the dorsum of the hand