

REFERENCE VALUES

for nerve ultrasound

All values representing the upper limit normal of the cross-sectional area (mm²) based on cited studies.
Further information: www.sonocampus.org

UPPER EXTREMITY

BRACHIAL PLEXUS

Roots

C5	11 mm ²
C6	15 mm ²
C7	17 mm ²
C8	16 mm ²

Haun US Med & Biol 2010

Trunks

upper	23 mm ²
middle	20 mm ²
lower	19 mm ²

Won Muscle Nerve 2012

Whole plexus

inter-scalene	23 mm ²
supra-clavicular	20 mm ²

Kerasnoudis Clin Neurophysiol 2013

AXILLARY NERVE

between teres major and humeral head	5 mm ² *
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Yoon Muscle Nerve 2019

MEDIAN NERVE

1/2 upper arm	16 mm ² *
Cubita	17 mm ²
1/2 forearm	11 mm ²
Wrist	15 mm ²

Qrimli Muscle Nerve 2016

ULNAR NERVE

1/2 upper arm	13 mm ² a
Cubita	12 mm ² a
1/2 forearm	9 mm ² b
Wrist	8 mm ² b

a. Boehm USchall Med 2014
b. Qrimli Muscle Nerve 2016



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MUSCULOCUTANEOUS NERVE

between biceps and brachialis muscle

Tagliafico J Ultrasound Med 2013

12 mm^{2*}

RADIAL NERVE

1/2 upper arm 13 mm^{2 a*}

Cubita 14 mm^{2 b*}

Superficial radial (middle lower arm) 4 mm^{2 a}

Deep radial (at supinator) 5 mm^{2 c}

a. Boehm USchall Med 2014

b. Cartwright Muscle Nerve 2008

c. Tagliafico J Ultrasound Med 2013

LOWER EXTREMITY

SCIATIC NERVE

Gluteal fold 50 mm^{2 a}

Mid thigh 63 mm^{2 b}

Distal thigh 80 mm^{2 c}

a. Chen J Med Ultrasound 2018

b. Seok Muscle Nerve 2014

c. Cartwright Muscle Nerve 2008

PERONEAL NERVE

Popliteal fossa 21 mm^{2 a}

Fibular head 20 mm^{2 b}

Superficial 3 mm^{2 c}

peroneal (distal leg)

a. Cartwright Muscle Nerve 2008

b. Kerasnoudis Clin Neurophysiol 2013

c. Qrimli Muscle Nerve 2016

TIBIAL NERVE

Popliteal fossa 56 mm^{2*}

Ankle 23 mm^{2*}

Cartwright Muscle Nerve 2008

SURAL NERVE

distal calf 9 mm^{2*}

Cartwright Muscle Nerve 2008

* > 100% of discrepancy between studies observed. Highest value provided.
For details please see: www.sonocampus.org/additionalresources

Your partner in
nerve ultrasound



SONOCAMPUS