

Review

Carotid Intima-Media Thickness for Atherosclerosis

Tomohisa Nezu et al. J Atheroscler Thromb. 2016.

Free article

Show details

Full text links

Cite

...

Abstract

The carotid intima-media thickness (IMT) is a widely used surrogate marker for atherosclerosis worldwide. The carotid IMT can be simply, noninvasively, and reproducibly measured through B-mode carotid ultrasound. The carotid IMT is also a strong predictor of future cerebral and cardiovascular events. In addition, regressions of increased carotid IMT by lipid-lowering and antihypertensive drugs have been reported. Despite the strong association between increased carotid IMT and cardiovascular disease, it remains unclear whether routine carotid IMT measurement is useful for the detection of subclinical atherosclerosis in clinical practice. Researches should consider other methodological aspects, such as the definition of carotid plaques, the choice of measurement sites on the common or internal carotid artery, and the assessment of maximum or minimum IMT. The detailed guidelines for measuring carotid IMT vary by county. Thus, the usefulness of the carotid IMT may be assessed in different countries taking racial differences into account. Other important parameters revealed by carotid ultrasound, such as artery stenosis and the characteristics and size of plaques, should also be considered. Physicians should comprehensively interpret the results of carotid ultrasonography. Therefore, carotid ultrasonography is an essential tool for assessing cardiovascular risk in clinical settings.

Similar articles

[Intima media thickness of the carotid arteries: early pointer to arteriosclerosis and therapeutic endpoint].
Ludwig M, et al. Ultraschall Med. 2003. PMID: 12817310 Review. German.

Carotid intima-media thickness: ultrasound measurement, prognostic value and role in clinical practice.
Nair SB, et al. Postgrad Med J. 2012. PMID: 22761324 Review.

Carotid Intima-Media Thickness as a Cardiovascular Risk Factor and Imaging Pathway of Atherosclerosis.
Centurión OA. Crit Pathw Cardiol. 2016. PMID: 27846007 Review.

No evidence of association between subclinical thyroid disorders and common carotid intima medial thickness or atherosclerotic plaque.
Delitala AP, et al. Nutr Metab Cardiovasc Dis. 2015. PMID: 26615224 Free PMC article.

Associations of cardiovascular risk factors, carotid intima-media thickness and left ventricular mass with inter-adventitial diameters of the common carotid artery: the Multi-Ethnic Study of Atherosclerosis (MESA).
Polak JF, et al. Atherosclerosis. 2011. PMID: 21726862 Free PMC article.

See all similar articles

Analysis of cardiovascular risks for erectile dysfunction in Chinese patients with type 2 diabetes mellitus lacking clinical symptoms of cardiovascular diseases.

Yuan P, et al. Transl Androl Urol. 2020. PMID: 33457224 [Free PMC article](#).

The Total Antioxidant Status, Serum Selenium Concentrations and the Ultrasound Assessment Carotid Intima Media Thickness in Patients with Arterial Hypertension.

Gac P, et al. Antioxidants (Basel). 2021. PMID: 33419108 [Free PMC article](#).

Optical coherence tomography and plaque morphology for revascularization of the superficial femoral artery.

Hartwig JW, et al. Quant Imaging Med Surg. 2021. PMID: 33392029 [Free PMC article](#).

Comparative analysis of the variability of carotid intima-media thickness in primary prevention populations of Moscow and Paris.

Kirichenko TV, et al. Am J Cardiovasc Dis. 2020. PMID: 33224597 [Free PMC article](#).

[See all "Cited by" articles](#)

Publication types

- Research Support, Non-U.S. Gov't
- Review

MeSH terms

- Atherosclerosis / diagnosis*
- Atherosclerosis / diagnostic imaging
- Atherosclerosis / metabolism
- Biomarkers / metabolism
- Cardiovascular Diseases / diagnosis
- Cardiovascular Diseases / metabolism
- Carotid Intima-Media Thickness*
- Clinical Trials as Topic
- Diagnosis
- Metabolic Diseases / metabolism*
- Risk Factors

Substances

- Carotid Artery

Related information

[MedGen](#)

LinkOut – more resources

Full Text Sources

[J-STAGE](#), [Japan Science and Technology Information Aggregator](#), [Electronic](#)

Other Literature Sources

[scite Smart Citations](#)

Medical

[MedlinePlus Health Information](#)

NCBI Literature Resources
[MeSH](#) [PMC](#) [BookShelf](#)

FOLLOW NCBI



Follow NLM



NLM | NIH | HHS | USA.gov