

Headache

Headaches (<https://www.radiologyinfo.org/en/info/headache>) are common, and most do not require imaging. However, imaging tests are important for headaches that have concerning features.

For adults with sudden-onset severe headache (“thunderclap headache”) that reaches maximal severity within 1 hour, CT head (<https://www.radiologyinfo.org/en/info/headct>) without intravenous (IV) contrast is usually appropriate.

For adults with primary migraines or tension-type headaches and a normal neurologic examination, imaging is usually not appropriate.

For adults with cluster headaches, MRI head (<https://www.radiologyinfo.org/en/info/mri-brain>) without and with IV contrast is usually appropriate.

For adults with headaches likely caused by high pressure around the brain, MRI head without and with contrast, MRI head without contrast, and CT head without contrast are usually appropriate. For adults with headaches likely caused by low pressure around the brain, MRI head without and with contrast is usually appropriate.

For adults with headaches with new onset or pattern during or after pregnancy, MRI head without contrast and CT head without contrast are usually appropriate.

MRI head without and with contrast, MRI head without contrast, and CT head without contrast are usually appropriate for adults with headaches with one of more of the following “red flags”: increasing frequency or severity, fever or neurologic symptoms, history of cancer or of immunocompromise, older age (>50 years) at time of onset, or onset after trauma. For adults with headaches without any of these “red flags” and who do not have sudden-onset (thunderclap) headache, symptoms of low or high brain pressure, or new onset or headache pattern during or after pregnancy, imaging is usually not appropriate.

For more information, see the Headache (<https://www.radiologyinfo.org/en/info/headache>) page.

— By Rachael Newman, BS, and Orit Ariel Glenn, MD. This information originally appeared in the *Journal of the American College of Radiology*.

Disclaimer

This information is copied from the RadiologyInfo Web site (<http://www.radiologyinfo.org>) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at <http://www.radiologyinfo.org> to view or download the latest information.

Note: Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple distribution by any traditional or electronically based reproduction/publication method is prohibited.

Copyright © 2025 Radiological Society of North America, Inc.