

Acute Mental Status Change, Delirium, and New Onset Psychosis

Changes in mental status can be caused by a variety of factors, including intoxication, infection, stroke (<https://www.radiologyinfo.org/en/info/stroke>), bleeding, tumor (<https://www.radiologyinfo.org/en/info/braintumor>), fluid, trauma (<https://www.radiologyinfo.org/en/info/headinjury>) or brain injury, and inflammation. This can show up as changes in behavior, alertness, agitation, confusion, and seizures. When there is high suspicion of bleeding, stroke, infection, or tumor or if the individual has extremely high blood pressure, CT (<https://www.radiologyinfo.org/en/info/headct>) or MRI (<https://www.radiologyinfo.org/en/info/mri-brain>) without intravenous (IV) contrast may be the initial examination. If the examination without contrast does not show the cause, follow-up CT or MRI performed with IV contrast may help if a tumor or an infection is suspected. If an individual has a known infection, tumor, recent bleeding, or recent acute stroke and his or her condition is getting worse, it may be appropriate to have CT or MRI of the head without IV contrast or MRI of the head with and without contrast. When the reason for mental state change is known, for example, intoxication, and the cause is not thought to be due to trauma, it may be appropriate to have MRI of the head without and with IV contrast. For individuals whose mental state is getting worse even with treatment or is getting worse without a cause, MRI or CT of the head without IV contrast and MRI of the head without or with IV contrast are usually appropriate. For an individual with new delirium (disturbed state of mind), CT of the head without IV contrast is usually appropriate. For an individual with new psychosis (disconnection from reality), CT or MRI of the head without IV contrast or MRI of the head without and with IV contrast may be appropriate.

— By Susan Anemone and Tasneem Lalani, MD. This information originally appeared in the *Journal of the American College of Radiology*.

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