

## Top Things to Know About An Updated Definition of Stroke for the 21<sup>st</sup> Century

1. The current World Health Organization definition most used in these modern times is outdated.
2. This updated definition is based on newer understanding of basic science, neuropathology, and neuroimaging, and necessitates a new revised definition of stroke. Recent advances have greatly improved our understanding of cerebral ischemia, infarction, and hemorrhage.
3. Occurrence of permanent injury is the basis of the new definition.
4. This updated definition builds upon a revised tissue definition of transient ischemic attack (TIA) by the AHA/ASA in 2009, based on newer understanding of components related to stroke diagnosis.
5. Tissue and clinical concepts applicable to practice, research, and public health assessments are included.
6. Central nervous system (CNS) infarction is defined as pathology occurring in the brain or spinal cord, or retinal cell death due to ischemia.
7. Ischemic death is based on clinical, neuroimaging, and neuropathological evidence of permanent injury.
8. Both ischemic and hemorrhagic strokes are addressed.
9. The new definition includes not only infarctions with overt clinical symptoms but also “silent infarction” – asymptomatic infarctions with no known overt symptoms – usually discovered by neuroimaging.
10. With the identification of “silent infarction,” potentially as a marker of other vascular diseases, appropriate prevention measures can be instituted depending on patient risk factors.