

Transient Ischemic Attack (TIA) Fact Sheet

What is a Transient Ischemic Attack (TIA)?

- A transient ischemic attack (TIA), also known as “mini stroke,” produces stroke-like symptoms that are temporary in nature and usually resolve within 24 hours
- TIAs generally do not cause permanent brain damage – some produce no outwardly recognizable symptoms at all – but a TIA is a serious warning sign of stroke risk that should not be ignored¹
- Common TIA symptoms include:²
 - Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
 - Sudden confusion, trouble speaking or understanding
 - Sudden trouble walking, dizziness, loss of balance or coordination
- TIAs are generally caused by:³
 - Reduced blood flow at a narrowing in a major artery to the brain, such as the carotid artery
 - A blood clot in the heart, or part of the body other than the brain, which can break off, travel to the brain and block a blood vessel
 - A narrowing in one of the small blood vessels in the brain that temporarily blocks blood flow
- TIAs are ischemic in nature and caused by inadequate blood supply due to a blood clot that blocks blood flow to the brain.
 - These blockages stem from three conditions: the formation of a clot within a blood vessel of the brain or neck, called thrombosis; the movement of a clot from another part of the body such as the heart to the neck or brain, called embolism; or a severe narrowing of an artery in or leading to the brain, called stenosis⁴
- 87% of all strokes are ischemic; 13% are hemorrhagic, which are caused by bleeding in the brain when a blood vessel bursts⁵

Impact of TIA in the United States

- An estimated 240,000 Americans are diagnosed with TIAs each year, and the annual number of undiagnosed TIAs likely exceeds this⁶
- More than one third of individuals who suffer a TIA are expected to eventually suffer a stroke⁷
- Approximately 15% of all strokes are preceded by a TIA⁸
- There are approximately 5.8 million stroke survivors in the United States⁹
- 20.1% of people who experience a TIA will have a stroke within 90 days¹⁰

Risk Factors

- Risk factors for stroke are divided into two groups: modifiable and non-modifiable. Paying proper attention to modifiable risk factors can help reduce the impact of non-modifiable ones.¹¹
 - **Modifiable risk factors:** high blood pressure, heart disease, diabetes mellitus (Type 2), high cholesterol, atrial fibrillation and lifestyle factors such as smoking, excessive alcohol intake, obesity and sedentary lifestyle

- **Non-modifiable risk factors:** age, gender, race, family/personal stroke/TIA history and Type 1 diabetes
- To help control your risk for TIA and stroke:¹²
 - Maintain a healthy lifestyle – do not smoke, eat a healthy diet, exercise regularly – and reduce stress
 - See a physician to regularly monitor hypertension, heart disease, cholesterol levels and other modifiable risk factors for stroke

Treatment and Management of TIA / Secondary Stroke Prevention

- Antithrombotic medications, which prevent the formation of blood clots in stroke patients, are the most commonly used treatments for secondary stroke prevention. Antithrombotics are divided into two categories:
 - **Anticoagulants** reduce the clotting property of blood and have been shown to prevent cardioembolic TIAs and strokes (e.g., strokes caused by a clot originating in the heart, usually caused by an underlying cardiac disease)
 - **Antiplatelets** reduce platelet activity to prevent the formation of clots associated with ischemic strokes; they are recommended for non-cardioembolic stroke (also known as thrombotic stroke, in which a clot forms in the blood vessel)¹³
 - Non-cardioembolic strokes are most commonly ischemic in nature; a daily regimen of antiplatelet medications is recommended for secondary stroke prevention
- The National Stroke Association recently published TIA treatment and management guidelines that list the combination of aspirin (50mg) and sustained-release dipyridamole (200 mg twice daily) as a reasonable first-choice therapy to reduce the risk of stroke in patients who have experienced a TIA¹⁴
- The recently updated treatment guidelines published by the American Heart Association recommend the combination of aspirin (50mg) and sustained-release dipyridamole (200 mg twice daily) and clopidogrel over aspirin alone for secondary stroke prevention¹⁵

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This information has been provided by Boehringer Ingelheim Pharmaceuticals, Inc.

¹ National Stroke Association. Transient Ischemic Attack Prevention. National Stroke Association, 2002. Found at: <http://www.stroke.org/site/DocServer/TIA.pdf?docID=405>

² American Heart Association. Heart Disease and Stroke Statistics: 2007 Update. Found at: <http://circ.ahajournals.org/cgi/reprint/115/5/e69>

³ National Stroke Association. Transient Ischemic Attack Prevention. National Stroke Association, 2002. Found at: <http://www.stroke.org/site/DocServer/TIA.pdf?docID=405>

⁴ National Institute of Neurological Disorders and Stroke. Brain Basics: Preventing a Stroke. What is a Stroke? Found at: http://www.ninds.nih.gov/disorders/stroke/preventing_stroke.htm

⁵ American Stroke Association. Heart Disease and Stroke Statistics – 2008 Update. Found at: <http://www.circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.107.187998v1>

⁶ National Stroke Association Guidelines for the Management of TIA. National Stroke Association. 2006. Found at: http://www.stroke.org/site/DocServer/TIA_Guidelines_070506_sm.pdf?docID=2361

⁷ National Stroke Association. Stroke facts: Recovery after Stroke: Recurrent Stroke. 2006

⁸ American Stroke Association. Heart Disease and Stroke Statistics – 2008 Update. Found at: <http://www.circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.107.187998v1>

⁹ American Heart Association/American Stroke Association Heart Disease and Stroke Statistics – 2008 update, p. 15. Found at: http://www.americanheart.org/downloadable/heart/1200082005246HS_Stats%202008.final.pdf

¹⁰ American Heart Association. Heart Disease and Stroke Statistics – 2008 Update. Found at:
<http://www.circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.107.187998v1>

¹¹ American Stroke Association. Stroke Risk Factors. American Heart Association, 2005. Found at:
<http://www.strokeassociation.org/presenter.jhtml?identifier=4716>

¹² National Stroke Association. Reducing Risk and Recognizing Symptoms Fact Sheet. Found at:
<http://www.stroke.org/site/DocServer/ReducingRiskfactsheet1.doc?docID=403>

¹³ Sacco, R. et al. Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack: a statement for healthcare professionals from the American Heart Association/American Stroke Association Council on Stroke: co-sponsored by the Council on Cardiovascular Radiology and Intervention: the American Academy of Neurology affirms the value of this guideline. *Stroke: Journal of the American Heart Association*. January 2006

¹⁴ National Stroke Association Guidelines for the Management of TIA. National Stroke Association, 2006. Found at:
http://www.stroke.org/site/DocServer/TIA_Guidelines_070506_sm.pdf?docID=2361

¹⁵ Sacco, R. et al. Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack: a statement for healthcare professionals from the American Heart Association/American Stroke Association Council on Stroke: co-sponsored by the Council on Cardiovascular Radiology and Intervention: the American Academy of Neurology affirms the value of this guideline. *Stroke: Journal of the American Heart Association*. January 2006