

Tests & Procedures Related to Strokes and Transient Ischemic Attacks (TIA)

Radiology:

Chest X-Ray: This is the most commonly performed non-invasive diagnostic test. The x-ray takes images of the heart, lungs, blood vessels, and bones of the spine and chest.

CT scan of the head: The CT scan is a form of x-ray used to look at the brain to detect bleeding or blood clots.

MRI of the brain: The MRI, or magnetic resonance imaging scan, is done to detect a stroke or to find out the extent of damage caused to the brain from having a stroke. The MRI uses a large magnet and computer to take pictures of the brain.

MRA of the brain: The magnetic resonance angiography, or MRA, is similar to the MRI. However, in this case, the scan is used to look at the blood vessels of the brain and helps detect possible narrowed areas or blockages in the blood vessels that could contribute to having a stroke.

Esophagram/Barium Swallow: This is an x-ray to study the function and appearance of the esophagus and assess the swallowing process. Liquid barium, or contrast, is swallowed and coats the inside of the esophagus. The radiologist evaluates the swallowing process during the x-ray.

Cardiovascular:

Carotid Doppler: This is a non-invasive ultrasound performed on the carotid arteries in the neck to assess the rate of blood flow through them and the amount of plaque buildup.

Transthoracic Echocardiogram: An "Echo" is a non-invasive ultrasound of the heart that shows 1) size and shape of the heart, 2) how well the heart is working overall, 3) if any section of heart muscle is weak, 4) problems with heart valves, or 5) if there is a blood clot. The bubble study portion of the test is when saline bubbles are injected into an IV and are watched on the ultrasound to see if they pass through a hole between two chambers of the heart; if so, this is called a patent foramen ovale (PFO).

Transesophageal echocardiogram (TEE): This test is very similar to the transthoracic echocardiogram and is done for the same reasons; however, this procedure is more invasive. The soundwaves are sent to the heart via a tube put down the patient's throat. This test is more accurate than the less invasive Echo. The patient receives medicine to help relax but is awake and able to answer questions. The patient is closely monitored during the entire procedure.

EKG: The electrocardiogram is a test that records the heart's activity. The EKG shows how fast the heart is beating, whether the heartbeat is steady or irregular, and the strength and timing of the electrical signals as they pass through each part of the heart.

Neurodiagnostics:

Electroencephalogram (EEG): This test measures the electrical activity made by the brain, also known as "brain waves." The EEG may indicate areas of brain injury or seizure activity.

Lab tests:

PT/INR/PTT: These are lab tests that are used to determine the clotting tendency of blood. The higher the number, the greater the risk is for bleeding and if the number is low, there is a greater risk for forming blood clots. A normal range for the INR of a healthy person is 0.9-1.3. The doctor may want this number higher depending on the patient's diagnosis.

Lipid panel: This is a blood test that measures lipids, or fatty substances used as a source of energy by the body. These include cholesterol, triglycerides, high-density lipoprotein (HDL) and low-density lipoprotein (LDL). An elevated lipid panel increases the risk for coronary artery disease, heart attack and stroke.

Cholesterol	0-200mg/dl	
	<200	desirable
	200-239	borderline
Triglycerides	>239	high risk
	<150mg/dl	
	<150	normal
	150-199	borderline
HDL Cholesterol	200-499	high
	>499	very high
	40-60mg/dl	
	<40	high risk
LDL Cholesterol	>59	desirable
	0-100mg/dl	
	<100	optimal
	100-129	near optimal
	130-159	borderline
	160-189	high
	>189	very high