



Salem Health

ICD-10 

ICD-10-CM TRAINING

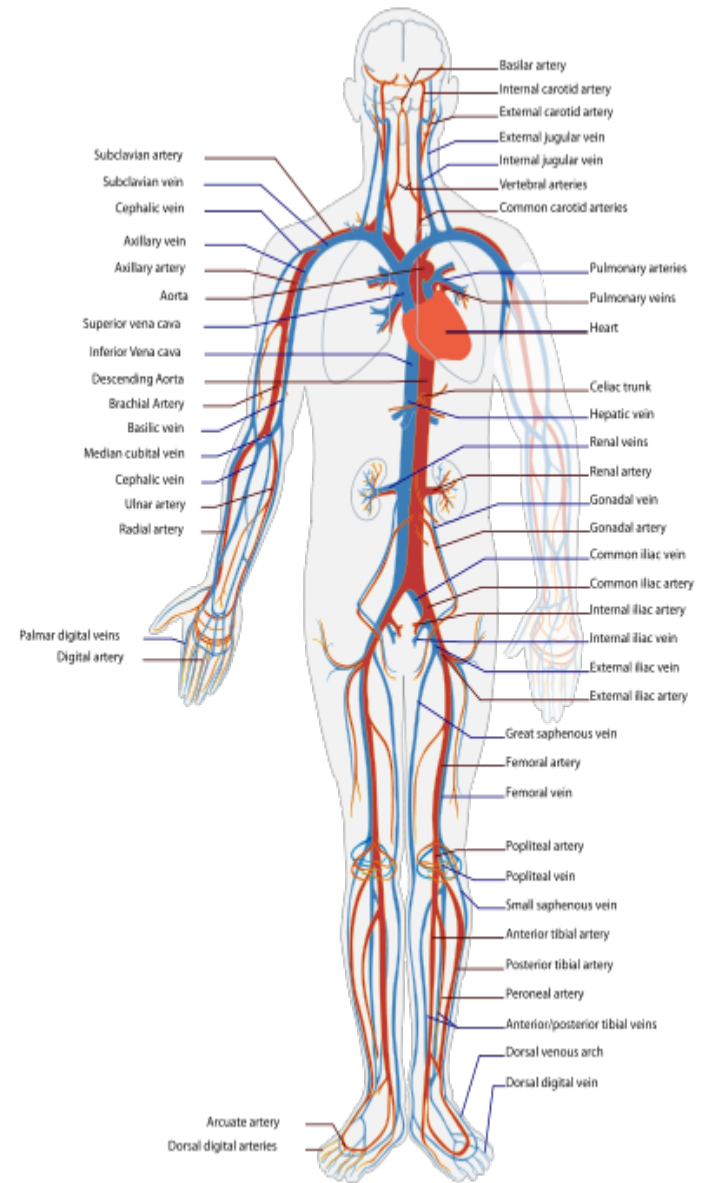
May 2013

Circulatory System The Ear

Linda Dawson, RHIT, AHIMA Approved ICD-10 Trainer

The Circulatory System - 100-199

The circulatory system is an organ system that permits blood and lymph circulation to transport nutrients (such as amino acids and electrolytes), oxygen, carbon dioxide, hormones, blood cells, etc. to and from cells in the body to nourish it and help to fight diseases, stabilize body temperature and pH, and to maintain homeostasis.



Diseases of the circulatory system

I00-I02 Acute rheumatic fever

I05-I09 Chronic rheumatic heart disease

I10-I15 Hypertensive diseases

I20-I25 Ischemic heart disease

I26-I28 Pulmonary heart disease and diseases of the pulmonary circulation

I30-I52 Other forms of heart disease

I60-I69 Cerebrovascular disease

I70-I79 Diseases of the arteries, arterioles and capillaries

I80-I89 Diseases of veins, lymphatic vessels and lymph nodes, NEC

I95-I99 Other and unspecified disorders of the circulatory system

The Heart

- Here is a short video clip on the heart
- <http://www.rightdiagnosis.com/animations/how-the-heart-works.htm>

Hypertension types changed

Deletion of the codes: benign, malignant and unspecified.

Hypertension table is no longer necessary.

Essential (primary) hypertension I10

Includes: High blood pressure

Hypertension (arterial) (benign) (essential)

(malignant) (primary) (systemic)

Hypertension

Hypertension with Heart Disease: I50.0 or I51.4-I51.9

Assigned to a code from I11 when a causal relationship is stated or implied as in “Hypertensive Heart Disease.”

***Use an additional code from I50.- Heart failure in those patients with heart failure.

Hypertensive Chronic Kidney Disease - Code I12 when both hypertension and a condition classifiable to N18.- (Chronic kidney disease) are present.

Hypertensive Heart and Chronic Kidney Disease – I13

Assign combination codes when both hypertensive kidney disease and hypertensive heart disease are stated in the diagnosis. Assign additional code for Heart failure if present. I50.

Hypertension

Uncontrolled – May be untreated hypertension or hypertension not responding to current therapeutic regimen.

Controlled – This diagnostic statement usually refers to an existing state of hypertension under control by therapy.

Assign the appropriate code from I10-I15.

Secondary Hypertension

When you have hypertension due to a specific disease process: Two codes are required.

- One for underlying etiology
- One from I15 to identify the hypertension.

Sequencing depends on the reason for the admission

Hypertensive Cerebrovascular disease I60-I69

First assign the appropriate code from I60-I69
then appropriate hypertension code.

Example: Nontraumatic acute subdural hemorrhage
due to Hypertension

I62.01

I10

Hypertensive retinopathy

I15

Subcategory H35.0, background retinopathy and retinal vascular changes, should be used with a code from I10-I15
Hypertensive disease due to systemic hypertension.



The sequencing depends on the reason for the admission.

Transient Hypertension

Assign code R03.0 Elevated Blood pressure if there is no diagnosis of hypertension, unless the patient has an established diagnosis of hypertension.

Gestational hypertension will be coded to the OB chapter in codes O13.- or O14.-.

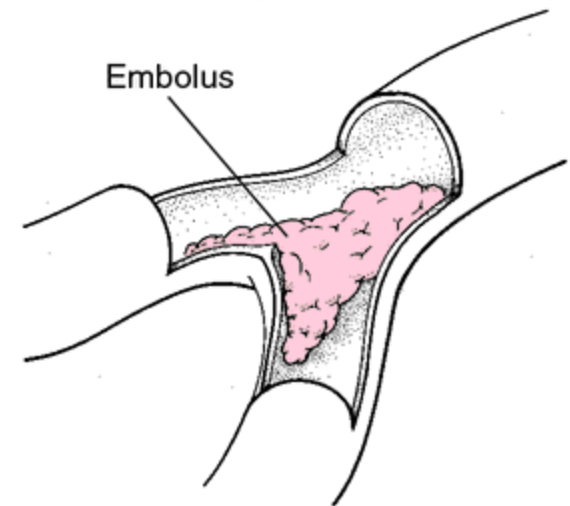
Pulmonary Embolism

Types –

- With acute cor pulmonale I26.0-
- Without acute cor pulmonale I26.9-

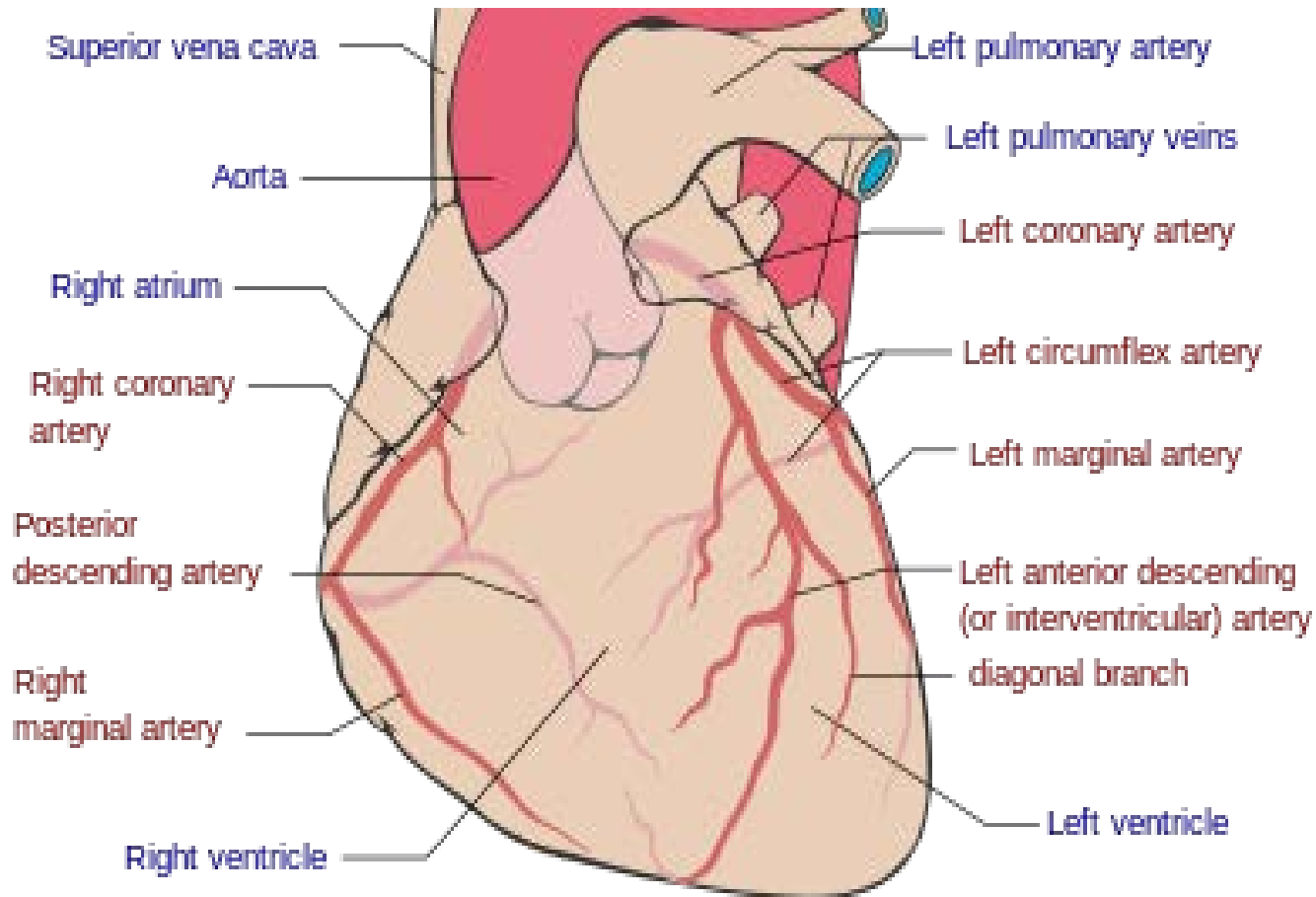
- Saddle embolism I26.02 I26.92
A large clot which occurs at the bifurcation of the pulmonary arteries and is a risk for sudden hemodynamic collapse.

- Other pulmonary embolism I26.09 I26-99
 - Septic I26.01 I26.90
 - Chronic I27.82



CAD

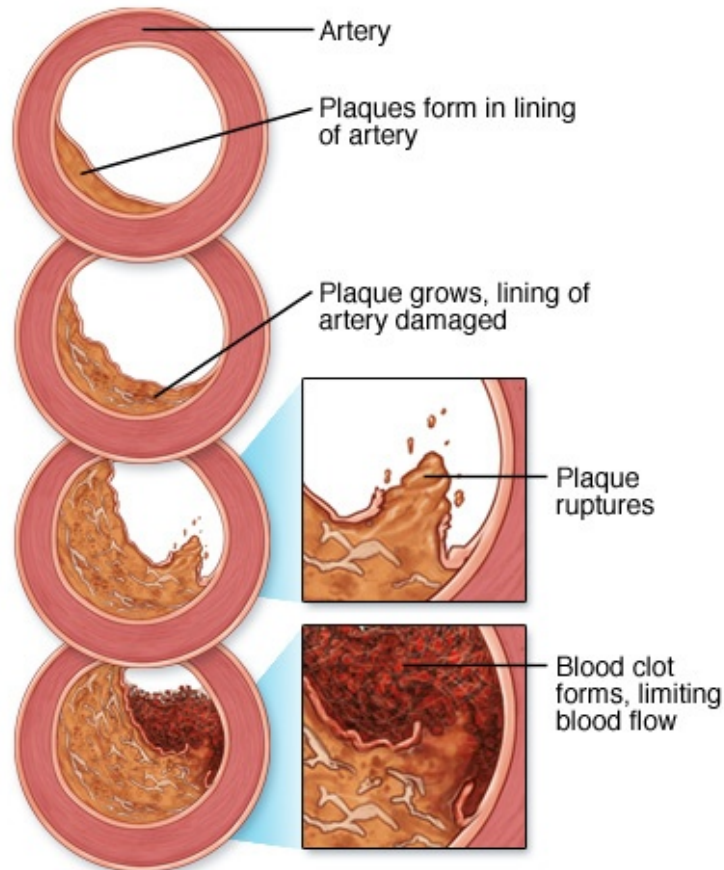
Arteriosclerosis without angina I25.8-



Terminology changes

Intermediate coronary syndrome has been updated and is now called unstable angina

Arteriosclerosis



ICD-10-CM differences

ICD-10-CM has combination codes in the cardiovascular chapter of the codebook for Chronic ischemic heart disease. A causal relationship can be assumed with the following subcategory.

I25.1- Atherosclerotic heart disease of native coronary artery

I25.7- Atherosclerosis of coronary artery bypass graft and coronary artery of transplanted heart

Combination codes

Certain diseases classifications have been expanded in ICD-10-CM to identify secondary disease processes, specific manifestations or associated complications.

- Combination codes may be used for the disease and the complication.
- Code to the highest degree of specificity

Example: I25.110 Atherosclerotic heart disease of native coronary artery with unstable angina pectoris
excludes1: Unstable angina without CAD

ICD-10-CM differences

I25.10 ASHD of native coronary artery without angina pectoris.

- I25.110 ASHD of native coronary artery with unstable angina
- I25.111 ASHD with angina pectoris with documented spasm
- I25.118 ASHD of native coronary artery with other forms of angina pectoris
- I25.119 ASHD of native coronary artery with unspecified angina

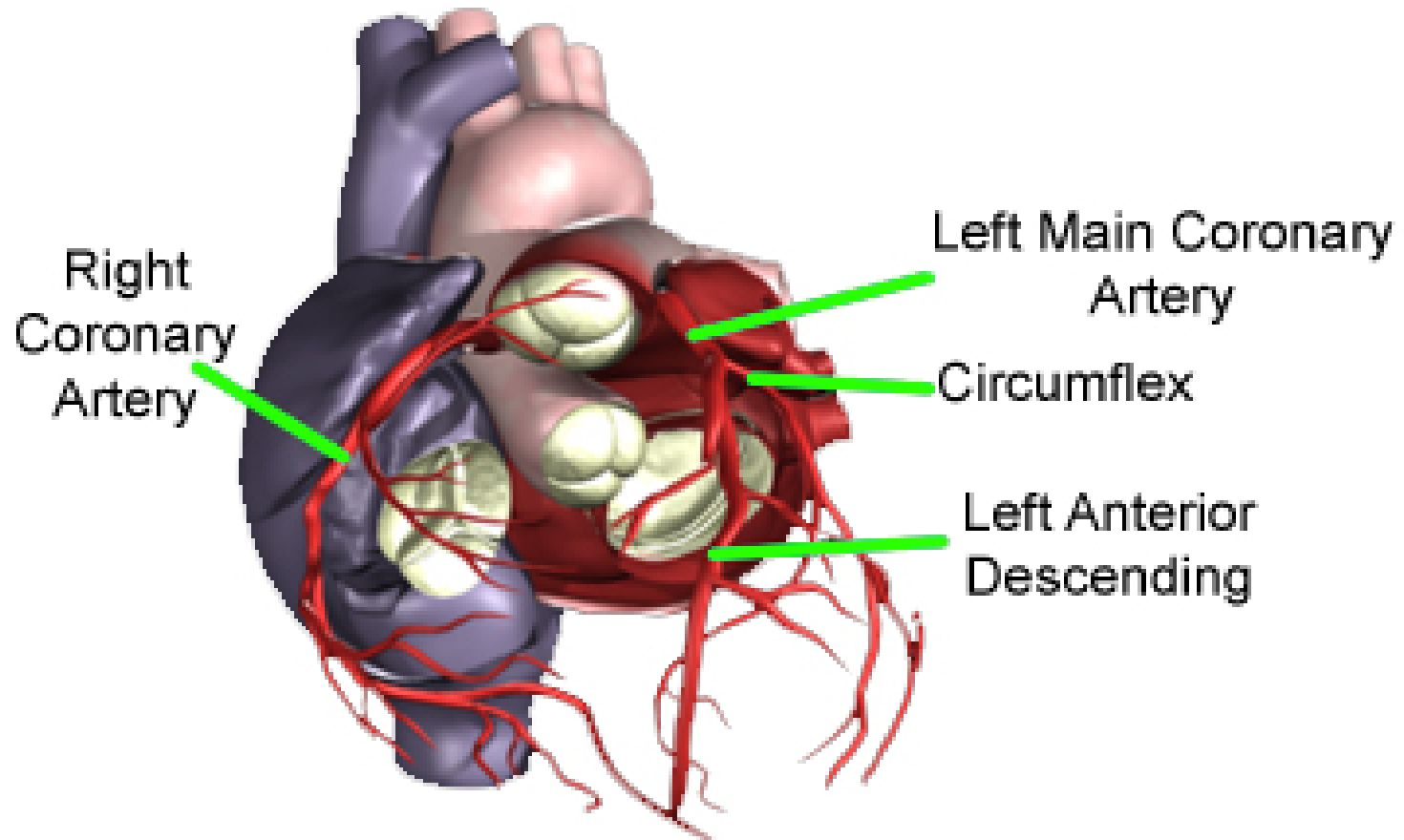
I25.7- ASHD of bypass grafts and transplanted hearts

Chronic ischemic heart disease

ASHD of autologous, autologous artery, nonautologous, biological, arteries of transplanted heart and other bypass grafts have same breakdown. See I25.-

- With unstable angina
- With documented spasm
- Angina pectoris
- Other forms of angina pectoris
- Unspecified angina pectoris

Coronary arteries





CAD

Code the MI first, followed by the CAD.

Coding guideline Section I.C.9.

MI guidelines

- NSTEMI-----→STEMI-----→-code to STEMI
- STEMI--→NSTEMI with thrombolytics----→code to STEMI
- Default for acute STEMI or transmural MI, unspecified site is:
I21.3
- AMI documented as nontransmural or subendocardial but site provided – code to subendocardial.

MI's

ICD-9-CM

acute MI is 8 weeks

ICD-10-CM

acute MI is 4 weeks

- Types: ST, Non-ST MI's, subsequent

MI's are now specified by artery causing the MI

- | | |
|----------------------------|------------------|
| • Right coronary | left circumflex |
| • Left main | other sites |
| • Left anterior descending | unspecified site |

Coronary arteries

Anterior Wall – Left main coronary

I21.0- Left anterior descending - diagonal
Other – anterior wall, anteroapical,
anterolateral, anteroseptal,
other anterior wall NOS

Inferior Wall - Right coronary,

I21.1- Other inferior wall – inferior wall,
inferolateral, diaphragmatic wall,
inferior wall, NOS

Coronary arteries

Other sites – left circumflex – oblique marginal

I21.2- other – apical-lateral, basal-lateral, high lateral, lateral wall, (true) posterior, posterobasal, posterolateral, postero-septal, septal NOS

Unspecified site – I21.3

NSTEMI - I21.4

Lipid Rich Plaque

If documented, use an additional code with I25.1, I25.7, or I25.81.

- I25.83 Lipid Rich Plaque
- I25.84 Calcified coronary artery lesion

Read operative reports, or cardiac cath reports to find this documentation.

Subsequent MI's

- A code from category I22, subsequent STEMI and NSTEMI is to be used when a patient has suffered an **MI** and has a **new AMI** within the **4 week time frame** of the initial MI.
- I22 – subsequent MI
- I21 – Initial MI
- The sequencing depends on the circumstances of the encounter.

Examples

A patient is admitted for AMI, but has a subsequent MI while in the hospital. The initial I21 code would be sequenced first as the reason for admission followed by the I22 code.

If a patient is discharged from the hospital for treatment of an initial MI, then has a subsequent MI after discharge requiring readmission, the I22 subsequent MI code is sequenced first, followed by the I21 code if it is in the 4 weeks time period.

MI's

- If patient is transferred to another facility within 4 weeks, and needs continuing care for the MI, codes from I21 may continue to be reported.
- If patient is treated after the 4 week time period and the patient still receiving treatment of the MI, the appropriate aftercare should be assigned.
- Old or healed MI without further care code I25.2.

Lets code one

- Joe Smith enters the hospital with a new STEMI of the left anterior descending artery. While in the hospital for his initial MI, he suffers another MI of the right coronary artery.

Complications of MI

- I23.0 Hemopericardium
- I23.1 Atrial septal defect
- I23.2 Ventricular septal defect
- I23.3 Rupture of cardiac wall without hemopericardium
- I23.4 Rupture of chordae tendineae
- I23.5 Rupture of papillary muscle
- I23.6 Thrombosis of atrium, auricular appendage, and ventricle
- I23.7 Postinfarction angina
- I23.8 Other current complication

Postinfarction Angina – I23.7

Post-infarction angina includes a syndrome of ischemic chest pain occurring either at rest or during minimal activity 24 hours or more following an acute MI. It develops in approximately 10 to 15 per cent of patients and is particularly common in non Q-wave infarcts involving the anterior myocardial wall. Post-infarction angina may result from ischemia either within the infarct zone or at a distance and frequently portends a poor long term prognosis. Platelet aggregation, coronary vasospasm, and thrombus formation at the site of a ruptured atherosclerotic plaque are each involved in its pathogenesis.

Atrial Fibrillation/Flutter

ICD-9-CM

- 427.31 427.32

ICD-10-CM

- I48.0 Paroxysmal atrial fibrillation
- I48.1 Persistent atrial fibrillation
- I48.2 Chronic atrial fibrillation
- I48.3 Typical atrial flutter
- I48.4 Atypical atrial flutter
- I48.9 Unspecified atrial fibrillation and atrial flutter
 - I48.91 Unspecified atrial fibrillation
 - I48.92 Unspecified atrial flutter

Atrial fibrillation

Paroxysmal atrial fibrillation (PAF), also termed intermittent AF, is defined as recurrent (two or more) episodes of AF that terminate spontaneously in less than seven days, usually less than 24 hours

- **a.** A sudden attack, recurrence, or intensification of a disease.
- **b.** A spasm or fit; a convulsion.
- *c periodic attack of a disease*

Example: Paroxysmal atrial fibrillation 148.0

Atrial fibrillation

Persistent atrial fibrillation - (AF) continues until reverted chemically or electrically, “longstanding persistent I48.1

Chronic atrial fibrillation – (AF) continues as the underlying rhythm of choice (permanent) I48.2

Typical Atrial Flutter – 148.3

Typical atrial flutter (AFL) is a common atrial arrhythmia that may cause significant symptoms and serious adverse effects, including embolic stroke, myocardial ischemia and infarction, and, rarely, a tachycardia-induced cardiomyopathy resulting from rapid atrioventricular conduction. As a result of the well-defined anatomic and electrophysiologic substrate and the relative pharmacologic resistance of typical AFL, radiofrequency catheter ablation has emerged since its first description in 1992 as a safe and effective first-line treatment. This article reviews the electrophysiology of typical AFL and techniques currently used for its diagnosis and management

Atypical atrial flutter 148.4

Atypical atrial flutter exhibits a more variable ECG pattern, and more than one circuit may be responsible. Atypical atrial flutter behaves much more like atrial fibrillation than does typical atrial flutter.

Sick Sinus Syndrome – 149.5

- Sick sinus syndrome is the name for a group of heart rhythm problems (arrhythmias) in which the sinus node — the heart's natural pacemaker — doesn't work properly.
- The sinus node is an area of specialized cells in the upper right chamber of the heart that controls the rhythm of your heart. Normally, the sinus node produces a steady pace of regular electrical impulses. In sick sinus syndrome, these signals are abnormally paced. A person with sick sinus syndrome may have heart rhythms that are too fast, too slow, punctuated by long pauses — or an alternating combination of all of these rhythm problems.
- Sick sinus syndrome is relatively uncommon, but the risk of developing sick sinus syndrome increases with age. Many people with sick sinus syndrome eventually need a pacemaker to keep the heart in a regular rhythm.

Ventricular Fibrillation I49.01



Ventricular Fibrillation I49.01

Ventricular fibrillation (V-fib or VF) is a in the heart, making them quiver rather than contract. While there is some activity, the lay person is usually unable to detect it by palpating (feeling) the major pulse points of the carotid and femoral arteries. Such an arrhythmia is only confirmed by electrocardiography. Ventricular fibrillation is a medical emergency that requires prompt Advanced Life Support interventions. If this arrhythmia continues for more than a few seconds, it will likely degenerate further into asystole ("flatline"). This condition results in cardiogenic shock and cessation of effective blood circulation. As a consequence, sudden cardiac death (SCD) will result in a matter of minutes. If the patient is not revived after a sufficient period (within roughly 5 minutes at room temperature), the patient could sustain irreversible brain damage and possibly become brain dead due to the effects of cerebral hypoxia. On the other hand, death often occurs if normal sinus rhythm is not restored within 90 seconds of the onset of VF, especially if it has degenerated further into asystole.

Video

- <http://www.rightdiagnosis.com/animations/ventricular-fibrillation.htm>

Heart Failure

- Types – Systolic and Diastolic

Acute and chronic

Rheumatic and nonrheumatic

Valvular Heart Disease

Rheumatic – I00-I09.9

Non-rheumatic – I33.0 – Acute and subacute endocarditis

I34 – I37 Nonrheumatic valve disorders

Terminology changes

ICD-9-CM 394-397

ICD-10-CM I05-I08

Diseases of mitral valve

Rheumatic mitral valve disease

Disease of the aortic valve

Rheumatic aortic valve disease

Diseases of the mitral and
aortic valves

Rheumatic tricuspid valve

Multiple valve diseases

Diseases of other

endocardial structures

Rheumatic Valvular Heart Disease

I00-I09.9

Chronic heart valve damage that can occur after a person has had an episode of acute rheumatic fever. This valve damage can eventually lead to heart failure.

- *Mitral valve disease* is the most common cardiac problem seen in rheumatic heart disease. In rheumatic heart disease, the mitral valve becomes laden with heavy deposits of calcium, which disrupt the normal function of the valve. Because of these heavy calcium deposits, the valve often fails to open completely (a condition called mitral stenosis). The same calcium deposits can also prevent the valve from closing completely, leading to mitral regurgitation (a "leaky" valve). So, people with rheumatic mitral valves often have both mitral stenosis and mitral regurgitation. *Aortic valve disease* is also common in rheumatic heart disease. Aortic valve damage is also caused by calcium deposits that disrupt normal valve function. And as with rheumatic mitral valves, rheumatic aortic valves can develop either stenosis or regurgitation, or both.
- The mechanical valve problems (both stenosis and regurgitation) caused by rheumatic heart disease can tremendously increase the workload on the heart muscle, and as a result *heart failure* frequently develops, often after a period of many years.

Etiology/Manifestations

Codes identified as manifestations codes cannot be sequenced first or reported alone.

I39 – Endocarditis and heart valve disorders in diseases classified elsewhere.
Code underlying disease first.

Multiple coding: “Code first” and “use additional code” provide sequencing rules.

I68.0 Cerebral amyloid angiopathy
code first underlying amyloidosis, E85.-

“ Use additional code” included here.

“Code first” manifestations may be used alone in certain circumstances.

I20.8 Other forms of angina pectoris (use additional code for symptoms)

I47 Paroxysmal tachycardia (code first tachycardia complicating OB surgery and procedures)

I50 Heart Failure (code first heart failure due to hypertension.)

Drug Induced Condition

Combination codes are used to show the causal drug and the external cause.

Adverse effects: Code the adverse effect followed by the drug responsible.

Arrhythmia, angina due to Morphine taken in correct dosage.

Poisoning, overdose, other circumstances : The T code is sequenced first.

Cardiac arrest – I46

I46.2 – Cardiac arrest due to the underlying cardiac conditions

I46.8 - Cardiac arrest due to other underlying condition

I46.9 – Cardiac arrest, cause unspecified

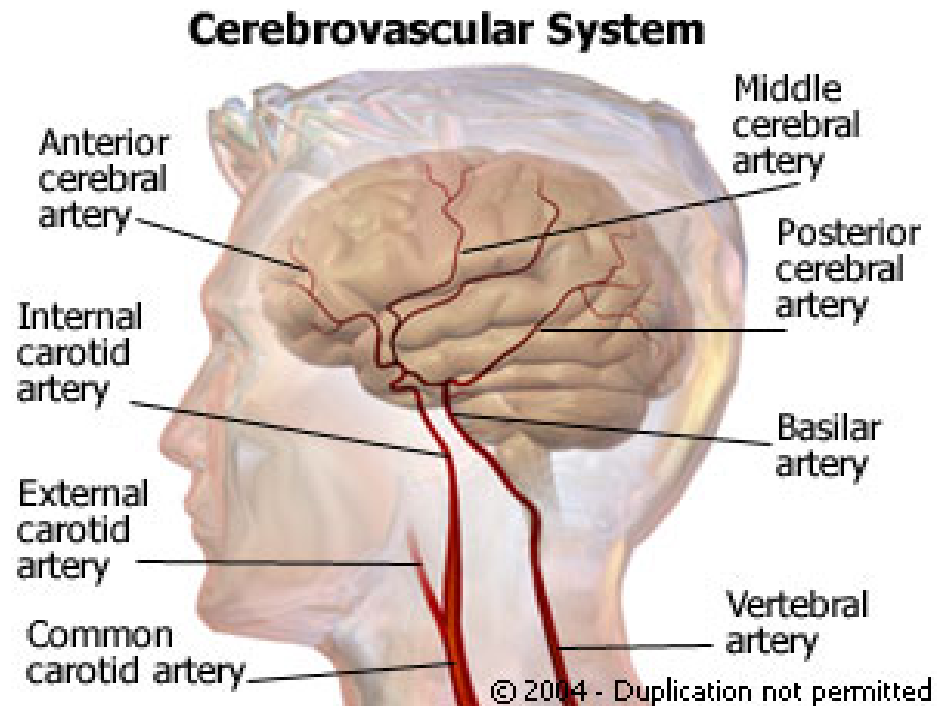
Digitalis Toxicity

Digitalis is a medication prescribed to certain heart patients. Digitalis toxicity is a complication of digitalis therapy, or it may occur when someone takes too much of the drug at one time

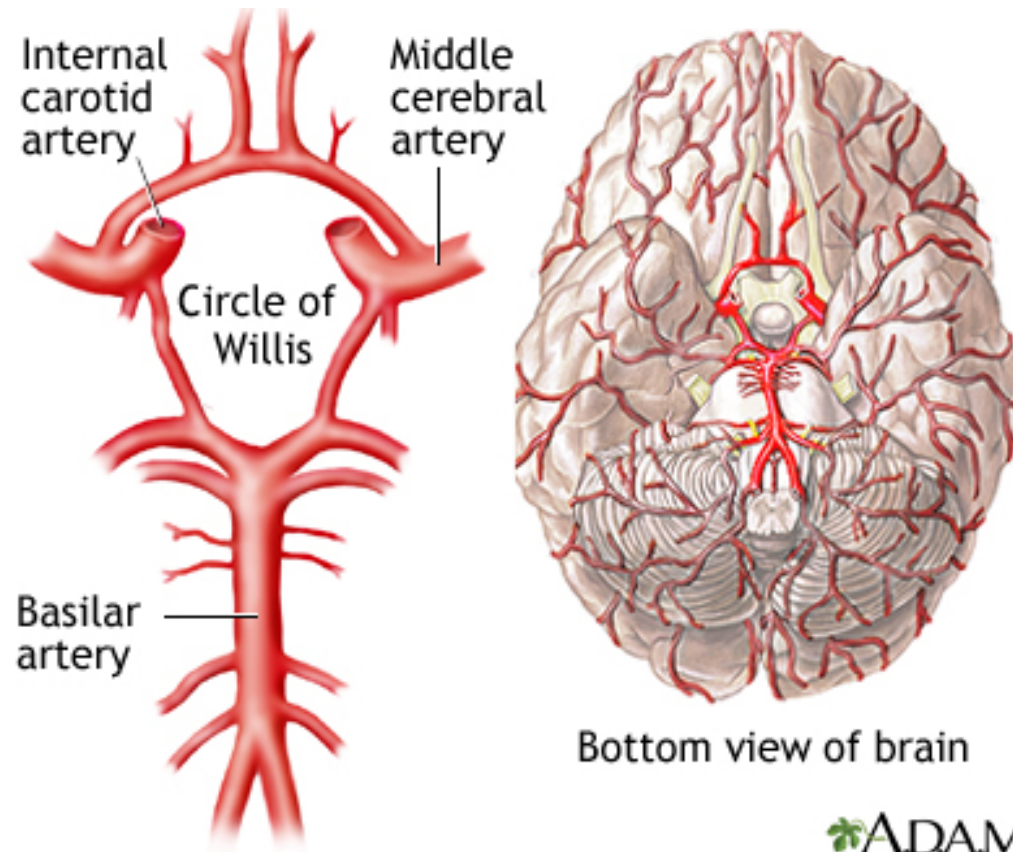
Symptoms

- Confusion
- Irregular pulse
- Loss of appetite
- Nausea, vomiting, diarrhea
- Palpitations
- Vision changes (unusual), including blind spots, blurred vision, changes in how colors look, or seeing spots)

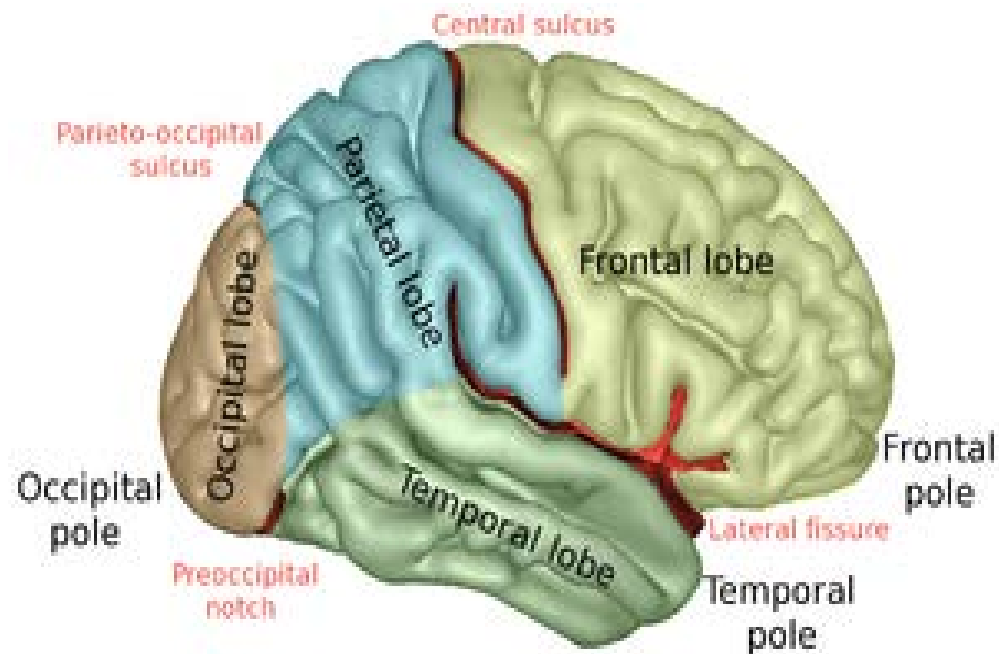
Cerebrovascular System



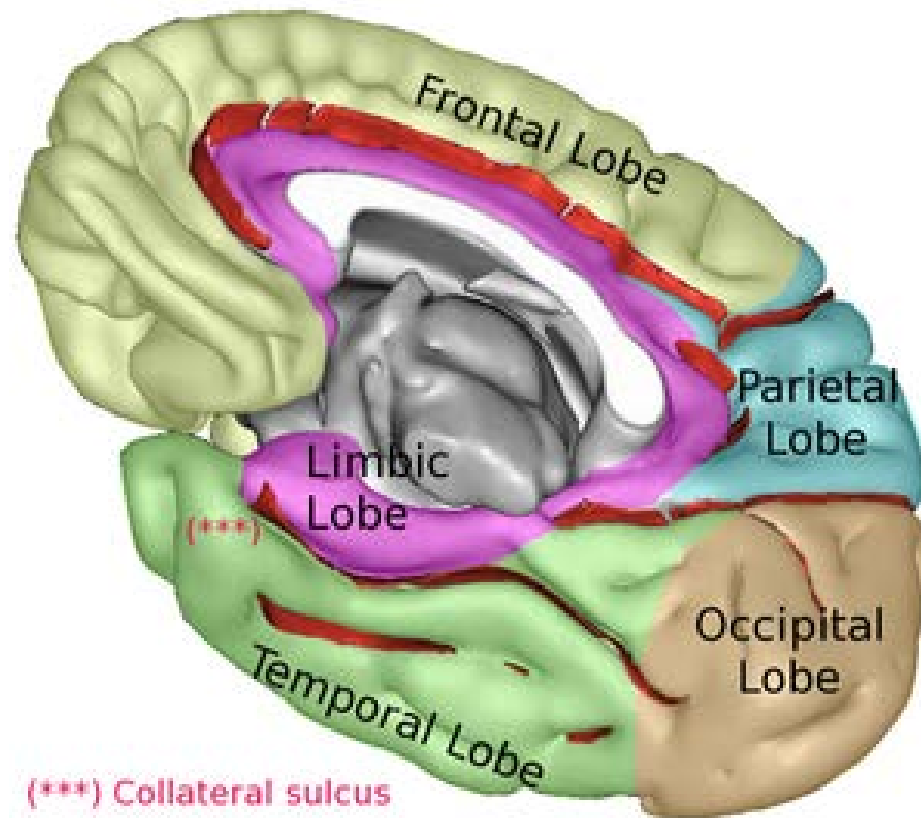
Cerebral Circulation



Lateral surface of the brain



Medial surface of the brain



Lobes of Brain and function

- **Frontal lobe**—conscious thought; damage can result in mood changes, social differences, etc. The frontal lobes are the most uniquely human of all the brain structures.
- **Parietal lobe**—plays important roles in integrating sensory information from various senses, and in the manipulation of objects; portions of the parietal lobe are involved with visuospatial processing
- **Occipital lobe**—sense of sight; lesions can produce hallucinations
- **Temporal lobe**—senses of smell and sound, as well as processing of complex stimuli like faces and scenes.
- **Limbic lobe**—emotion, memory
- **Insular cortex**—pain, some other senses.

Subarachnoid Hemorrhage-I60

NONTRAUMATIC - Specified by specific artery in the brain causing the hemorrhage

- Carotid siphon
- Middle cerebral artery
- Anterior communicating artery
- Posterior Communicating artery
- Basilar artery
- Vertebral artery
- Unspecified artery – ruptured berry aneurysm
- Other – meningeal and rupture of cerebral arteriovenous malformation

Intracerebral hemorrhage

Specified by location in the brain -

- Hemisphere - Subcortical – deep in the brain I61.0
- Hemisphere - Cortical – cerebral lobe or superficial hemorrhage I61.1
- Hemisphere – Unspecified I61.2
- Brain Stem I61.3
- Cerebellum I61.4
- Intraventricular I61.5
- Multiple localized I61.6
- Other I61.8
- Unspecified I61.9

Intracranial hemorrhages

- I62.0 Nontraumatic subdural hemorrhage, unspecified
- I62.1 Nontraumatic acute subdural hemorrhage
- I62.2 Nontraumatic subacute subdural hemorrhage
- I61.9 Nontraumatic chronic subdural hemorrhage

Cerebral Infarction

Site Specific

Thrombosis of Precerebral arteries I63.0

- vertebral artery
- carotid artery

Embolism of precerebral arteries I63.1

- Vertebral artery
- Carotid artery

Unspecified occlusion or stenosis of precerebral artery

- Vertebral artery
- Carotid artery

Cerebral Infarction

Site Specific

Thrombosis of cerebral arteries I63.3

- Middle cerebral artery
- Anterior cerebral artery
- Posterior cerebral artery
- Cerebellar artery

Embolism of cerebral arteries I63.4

- Same arteries as above

Unspecified occlusion or stenosis of cerebral arteries I63.5

- Same as above

Intraoperative and postprocedural CVA's – 197.82-

- Medical record documentation must be clearly specify a cause and effect relationship between the CVA and the medical intervention.
- Proper code depends on:
 - Infarction
 - Hemorrhage.
 - depends on the type of procedure performed.

Sequela of Cerebrovascular Disease

(Late effects)

I69

Conditions classifiable to categories I60-I67 as the cause of sequela (neurologic deficits) which are classified elsewhere.

The symptoms persist after the initial cerebrovascular disease.

May arise at any time after the onset of the disease.

Sequela of Cerebrovascular Disease

Hemiplegia, Hemiparesis, or Monoplegia

- Dominant
- Non-dominant

Affected side is documented, but not specified as dominant or non-dominant, code as follows:

- Ambidextrous patients- default is dominant
- Left side is affected – default is non-dominant
- Right side is affected, the default is dominant

Old CVA with current CVA

If a patient has a new CVA and has deficits from the old CVA

- Code the new CVA and deficits
- Code the Sequela of old CVA (I69) as an additional code

Example: A patient has a new CVA due to a embolism of the right carotid artery. They have dysphagia and dysphasia due to the current stroke. They also have a history of a previous Cerebral infarction with resulting hemiplegia of their R. dominant side.

I63.131 R13.10 R47.02

New CVA

I69.351

Sequela of old CVA

I69

Do not code I69 with code Z86.73

Sequela of CVA with Personal history of TIA/cerebral
infarction

I69 should only be assigned if the patient has **residual neurological deficits**

Anatomy of arteries

http://en.wikipedia.org/wiki/List_of_images_in_Gray's_Anatomy:_VI._The_Arteries

Arteriosclerosis – I70

Category I70 Atherosclerosis classifies arteriosclerotic vascular disease by:

- Type
- Associated condition
- Severity
- Anatomic site
- Laterality

Arteriosclerosis – I70

Specific subcategories include the following information:

- Major anatomical site: aorta, renal artery, extremity, other arteries, generalized disease, or unspecified site
- Type of affected vessel: Native or bypass graft

Arteriosclerosis, arteriosclerotic

extremities (native arteries) I70.209

bypass graft I70.309

autologous vein graft I70.409

Arteriosclerosis – I70

Subcategories continued:

- Types of bypass grafts (unspecified, autologous, nonautologous)
- Graft Subtypes: nonautologous, unspecified, biological, nonbiological
- Associated **complications** and manifestations: Rest pain, intermittent claudication, ulceration, or gangrene.
Report code I70.92 to identify chronic total occlusion of the artery, if documented.
Arteriosclerosis with ulceration required an additional code for the stage of the ulcer.

Arteriosclerosis – I70

Complications continued:

- Code the site of the ulcer if applicable: thigh, calf, ankle, heel and midfoot, other part of foot, or leg unspecified
- Laterality is required in ICD-10-CM

See Code I70.221 Arteriosclerosis of native artery of extremities with rest pain, R. leg

See code I70.662 Arteriosclerosis of nonbiological bypass graft of the extremities with gangrene, left leg.
code also the stage of the ulcer.

Arteriosclerosis – I70

Extremities: Codes for R., L., and bilateral

Site of leg: thigh, calf, ankle, heel, midfoot, foot, other.

Vessel: Native, bypass graft, autologous vein bypass graft, nonautologous biological bypass graft, nonbiological bypass graft

Symptom: claudication, rest pain, ulcer, and ulcer with gangrene.

170

Instructional notes prompt the coder to use an additional code for the presence of associated clinical health risks and co-morbid conditions.

- Exposure to environmental tobacco smoke
- History of tobacco abuse
- Occupational exposure to tobacco smoke
- Tobacco dependence
- Tobacco use

Excludes 2 Notes

- Excludes 2 notes specify multiple conditions classifiable elsewhere.
- Excludes notes indicate that the excluded condition is not part of the condition it is excluded from, as a patient may have both conditions at the same time. Both the code and the excluded code may be reported together if documented.

Example: Essential (primary) Hypertension

Hypertension of the vessels of the brain or the
eye.

Arteriosclerosis bilateral legs

Disease that is not bilateral in nature, and not classifiable to a single code may require multiple codes to report accurately the status of the disease in its entirety.

- separate affected vessel types (native, bypass, graft)
- Manifestations (rest pain, ulceration)
- Level of severity in the affected extremity.

Example

A patient presents with R. lower leg native atherosclerosis with intermittent claudication. He also has left lower extremity atherosclerosis of an autologous bypass vein graft with rest pain and ulceration of the heel and breakdown in the skin.

I70.211 Native artery of the extremity with intermittent claudication, right leg

I70.444 Autologous vein bypass graft (s) of the left leg with ulceration of the heel and midfoot

I70.421 Non-pressure ulcer of the left heel and midfoot limited to breakdown of skin

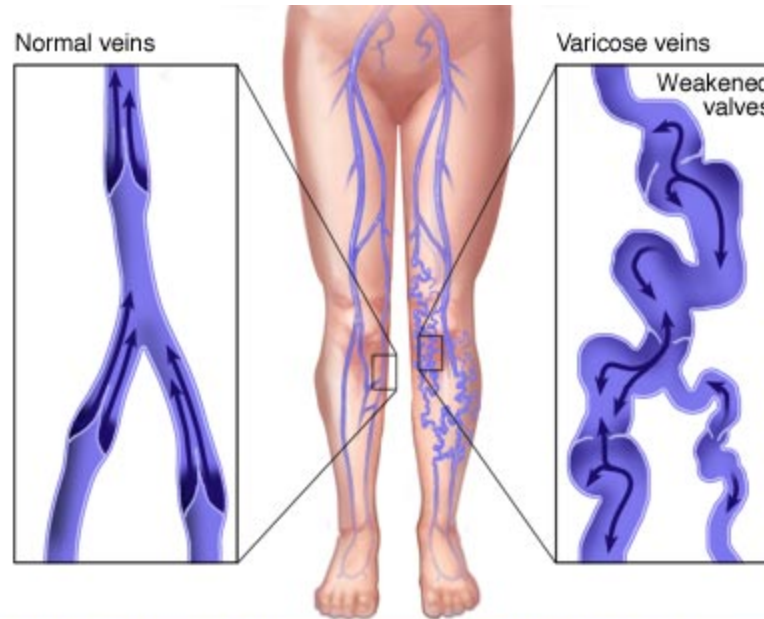
Code also the severity of the ulcer (L97.-)

Septic arterial Embolism-176

A **septic embolism** is a type of embolism that is infected with bacteria, resulting in the formation of pus.

Septic emboli most often originate from extrapulmonary locations which have been infected for a period of time. For example, a person's intravenous access site, which is used to insert intravenous drugs, may become infected. When present in great number, septic emboli can coalesce and mimic a lobar or bronchopneumonia. The infected site, combined with various coagulants that may be generated by the bacteria or the body, may then break off and enter the circulatory system, potentially causing a clot.

Varicose Veins – 183



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Specificity:

- Laterality: R vs L
- Site specific: thigh, calf, ankle, heel and midfoot, other
- Severity: inflammation, ulcer,

Additions to the Circulatory chapter

Unspecified lymphadenitis

Moved to Chapter 9 in I-10

Gangrene

Moved to Chapter 9 in I-10

Deletions from Circulatory system chapter

TIA's moved to Chapter 6 – Diseases of the Nervous system

435

G45

HYPOTENSION – I95

- I95.0 Idiopathic
- I95.1 Orthostatic
- I95.2 Hypotension due to drugs
- I95.3 Hypotension of dialysis
- I95.8 Other
 - I95.81 Postprocedural
 - I95.89 Other (chronic)
- I95.9 Hypotension, unspecified

GANGRENE – I96

Gangrenous cellulitis

Excludes 1: Gangrene in arteriosclerosis I70.26

Gangrene in diabetes mellitus E08-E13

Gangrene in hernia (K40-K46) 4th digit of “1”

Gangrene in other PVD I73.-

Gangrene of certain specified sites – see alpha
index

Gas Gangrene A48.0

Pyoderma gangrenosum L88

Definitions

Gas Gangrene is caused by *Clostridium perfringens* or *Group A streptococcus*. The bacteria makes gas and harmful toxins that damages body tissues, cells and blood vessels.

Rare in the U.S.

Caused a pale to brownish-red discoloration of the skin

Pressing on the area produced a crackly sensation.

Intraoperative and Postprocedural complications - I97

- I97.1 – Postcardiotomy syndrome - (PPS) is a febrile illness secondary to an inflammatory reaction involving the pleura and pericardium. It is more common in patients who have undergone surgery that involves opening the pericardium. However, postpericardiotomy syndrome has also been described following myocardial infarction (Dressler syndrome) and as an unusual complication after percutaneous procedures such as coronary stent implantation, after implantation of epicardial pacemaker leads and transvenous pacemaker leads, and following blunt trauma, stab wounds, and heart puncture.
- Pericardial effusions often accompany the syndrome and may develop into early or late postoperative cardiac tamponade and even recurrent cardiac tamponade. The syndrome is also characterized by pericardial or pleuritic pain, friction rubs, pleural effusions, pneumonitis, and abnormal ECG and radiography findings (see Workup).

Postprocedural cardiac functional disturbances I97.1

I97.11 Postprocedural cardiac insufficiency

I97.12 Postprocedural cardiac arrest during cardiac surgery

I97.13 Postprocedural cardiac failure

I97.19 Other postprocedural cardiac functional disturbance

***above codes have fifth digit specifying if after a cardiac surgery or other surgery

I97.2 Postmastectomy lymphedema syndrome

I97.3 Postprocedural hypertension

Intraoperative/Postprocedural Complications

- 197.4 Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating a procedure
- 197.5 Accidental puncture and laceration of a circulatory system organ or structure during a procedure
- 197.6 Postprocedural hemorrhage and hematoma of a circulatory system organ or structure following a procedure
- 197.7 Intraoperative cardiac function disturbances

Intraoperative/Postprocedural Complications

197.8 Other intraoperative and postprocedural complications and disorders of the circulatory system, NEC

197.81 Intraoperative CVA

197.82 Postprocedural CVA

197.88 Other intraoperative complications of the circulatory system , NEC

197.89 Other postprocedural complications and disorders of the circulatory system, NEC

199 – Other and unspecified disorders of the circulatory system.

Chapter 8: Diseases of the ear and Mastoid Process

- No coding guidelines at this time
- “☀️ ♀️ ♦️ ♀️ ◻️ ❖ ♀️ Ω ♂️ ◻️ ◻️ ♂️ ♦️ ♦️ ♦️ ◻️ ♀️ ♀️ ⊗ ◻️ ☯️ ■ ♦️)(◻️ ■”

Differences I-9 to I-10

ICD-9-CM

Diseases of the Nervous System and sense organs

Category changes 381-381

Cerebrospinal fluid otorrhea
subchapter - ear and mastoid

Acute, chronic conditions

ICD-10-CM

Diseases of the Ear and Mastoid Process

Laterality

Categories H65-H69 - five categories

Cerebrospinal fluid leak
included in Nervous system

acute, chronic and recurrent

Excludes note

You will notice an excludes note at the beginning of the chapter to clarify that certain conditions are classified elsewhere:

- Certain conditions in the perinatal period P04-P96
- Certain infectious and parasitic diseases A00-B99
- Complications of pregnancy O00-O99
- Congenital malformations Q00-Q99
- Endocrine, nutritional and metabolic diseases E00-E88
- Injury, poisoning and other consequences of external causes S00-T88
- Neoplasms C00-D49
- Signs, symptoms R00-R94

Chapter Notes

Notes at the beginning of the chapter state:

- Use an external cause code, if applicable, with chapter 8 to identify causal factors.
- “Code also” or “Use additional code, if applicable” to report a disease or condition in its entirety.
- Etiology/Manifestation instructions (Code underlying disease/use additional code) to appropriately sequence otological disease manifestations secondary to causal condition classified elsewhere.

CHAPTER 8. DISEASES OF THE EAR AND MASTOID PROCESS

(H60–H95)

Chapter 8 contains five code families with the first character “H.”

The coding families classified to chapter 8 are:

- **H60–H62 Diseases of external ear**
- **H65–H75 Diseases of middle ear and mastoid**
- **H80–H83 Diseases of inner ear**
- **H90–H94 Other disorders of ear**
- **H95 Intraoperative and postprocedural complications and disorders of ear and mastoid process, not elsewhere classified**

ICD-10-CM classifies disorders of the ear and mastoid process by anatomic site, according to those conditions that affect the external (H60–H62), middle (H65–H75), or inner (H80–H83) ear. Additional classification sections follow:

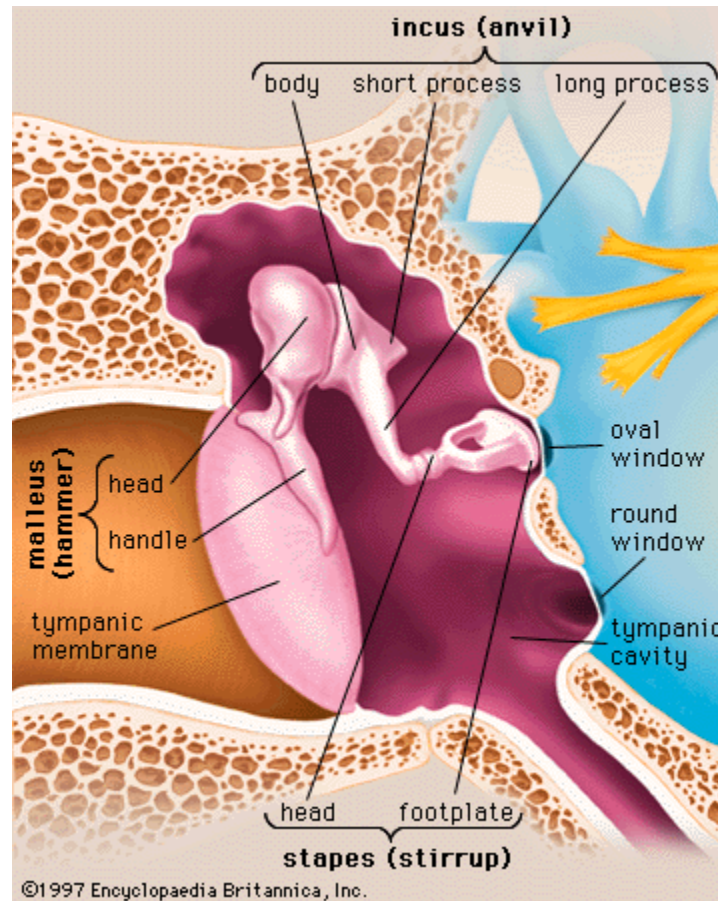
- that group together other disorders of ear (H90–H94)
- intraoperative or postprocedural disorders (H95).

The Ear

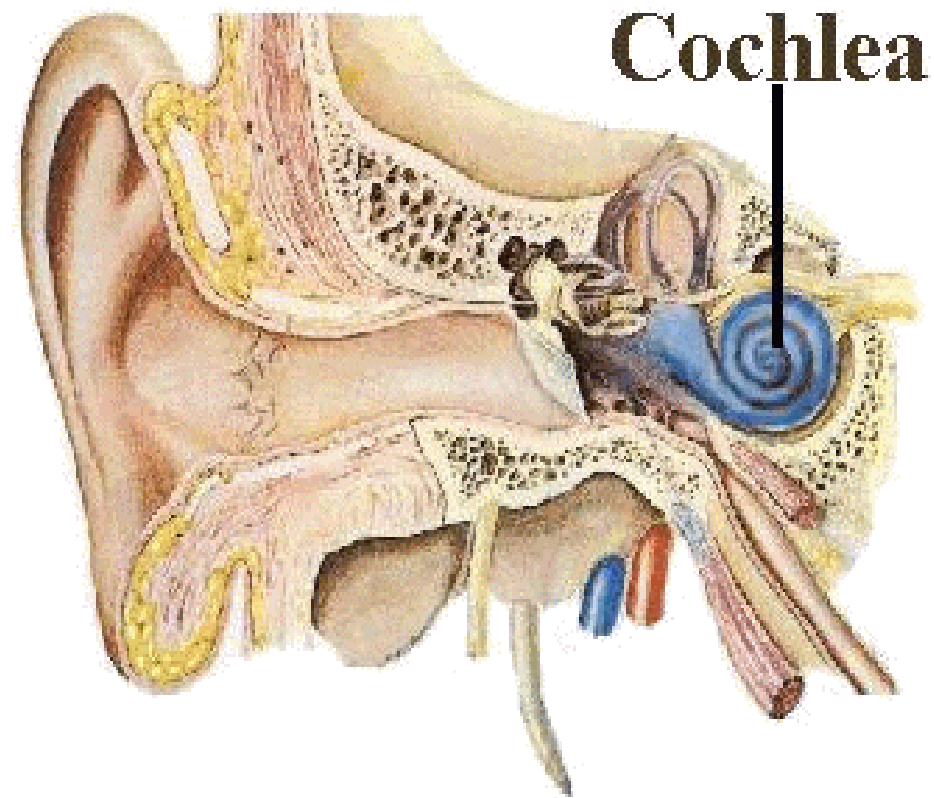


The outer ear is the most external portion of the ear. The outer ear includes the pinna (also called auricle), the ear canal, and the very most superficial layer of the ear drum (also called the tympanic membrane)

The Middle ear



The inner ear



Alec N. Salt, Washington University

Otitis Externa H60.xx

- **Infectious**

- Abscess

- Cellulitis

- Hemorrhagic

- Malignant

- **Non-infectious**

- Dermatitis

- Contact

- Reactive

Cholesteatoma H60.4

- Cholesteatoma is a type of skin cyst located in the middle ear and skull bone (mastoid).
- Cholesteatoma can be a birth defect (congenital), but it more commonly occurs as a complication of chronic ear infection.
- Poor function in the eustachian tube leads to negative pressure in the middle ear. This pulls a part of the eardrum (tympanic membrane) into the middle ear, creating a pocket or cyst that fills with old skin cells and other waste material. The cyst can become infected. The cyst may get bigger and break down some of the middle ear bones or other structures of the ear, affecting hearing, balance, and possibly function of the facial muscles

Diseases of the ear

Congenital disorder of the ear are not included in this chapter of the codebook.

See Anomalies, ear Q16-Q17

Ear Infections

- **Specificity**

Right

Left

Acute – included subacute

Chronic – includes glue ear, non-purulent effusion

Recurrent

Suppurative

nonsuppurative – includes exudative

serous

mucoid – includes secretory, mucinous, transudative

allergic

Nonsuppurative otitis media H65

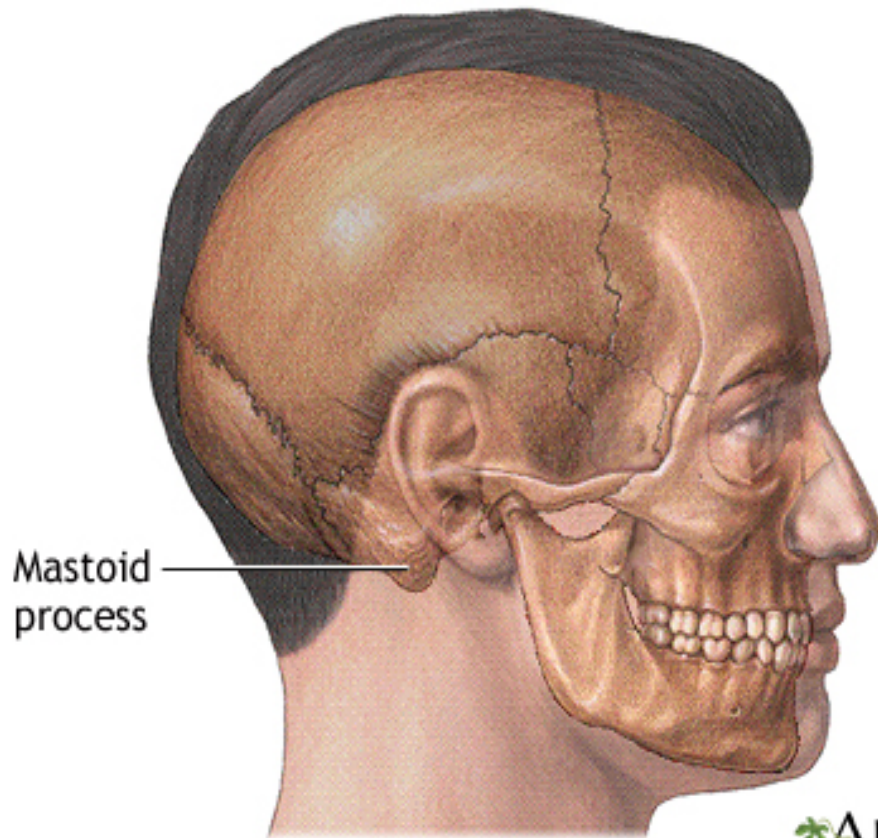
Includes : Nonsuppurative otitis media with myringitis

Use additional code for any associated perforated tympanic membrane (H72.-)

Use additional code:

- Exposure to environmental tobacco smoke Z77.2
- Exposure to tobacco smoke in the perinatal period (P96.81)
- History of tobacco use Z87.89
- Occupational exposure to environmental tobacco smoke Z57.31
- Tobacco dependence F17.-
- Tobacco use Z72.0

Mastoid Process



Mastoiditis H70

- Mastoiditis is an infection of the mastoid bone of the skull. The mastoid is located just behind the ear.
- Mastoiditis is usually caused by a middle ear infection (acute otitis media). The infection may spread from the ear to the mastoid bone of the skull. The mastoid bone fills with infected materials and its honeycomb-like structure may deteriorate.
- Mastoiditis usually affects children.

Cholesteatoma Middle Ear

H71

- Cholesteatomas have been recognized for decades as a destructive lesion of the skull base that can erode and destroy important structures within the temporal bone. Its potential for causing central nervous system complications (i.e. brain abscess, meningitis) makes it a potentially fatal lesion.

H75

Mastoiditis in infectious and parasitic diseases classified elsewhere.

***Code first the Underlying disease

***code mastoiditis related to the infectious disease

Disorders of vestibular function

H81.0 Meniere's disease

H81.1 Benign paroxysmal vertigo

H81.2 Vestibular neuronitis

H81.31 Aural vertigo

H81.39 Other peripheral vertigo – otogenic vertigo

H81.4 Vertigo of central origin

H82 Vertiginous syndromes in diseases classified elsewhere
code underlying disease first.

Hearing loss

H83.3X Noise effects on the inner ear

H90 Conductive and sensorineural hearing loss

Conductive - when there is a problem conducting sound waves anywhere along the route through the outer ear, tympanic membrane (eardrum), or middle ear (ossicles). This type of hearing loss may occur in conjunction with sensorineural hearing loss H90.0- H90.2

Children – otitis media Adults - Otosclerosis

Sensorineural - a type of hearing loss in which the root cause lies in the vestibulocochlear nerve (Cranial nerve VIII), the inner ear, or central processing centers of the brain. H90.3- H90.5

H91 **Other hearing loss** –

- Ototoxic due to drug, sudden idiopathic, deaf non-speaking, and presbycusis (age related changes in the blood supply to the ear because of heart disease, high blood pressure, vascular (pertaining to blood vessels) conditions caused by diabetes, or other circulatory problems.

H93.01 Transient ischemic deafness - Sudden loss of blood flow in the blood vessels.

Ototoxic hearing loss

Hearing loss, left ear due to adverse effects of NSAIDs,
initial encounter

H91.02 Ototoxic Hearing loss, left ear

T39.315A Adverse effects of NSAIDs, initial encounter

Intraop and Postprocedural complications

H95.0 -.1 Postmastoidectomy complications

Recurrent cholesteatoma's - postmastoidectomy cavity

Chronic inflammation

Granulation

Mucosal cyst

Other disorders

H95.2 Intraoperative hemorrhage of ear and mastoid process

H95.3 Accidental puncture/perforation

H95.4 Postprocedural hemorrhage and hematoma

H95.8 Other intraoperative and postprocedural complications

Postprocedural stenosis



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ICD-10

REFERENCES

- CMS:
<http://www.cms.gov/Medicare/Coding/ICD10/index.html>
- AHIMA: <http://www.ahima.org/>
- AAPC: <http://www.aapc.com/>
- ACDIS: <http://www.hcpro.com/acdis/index.cfm>
- HCPro Just Coding: <http://www.justcoding.com/>



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QUESTIONS?