

Section III

Crosswalks between ICD-10 and the headache classification of the IHS

The ICD-NA classification of headache disorders and facial neuralgias is for the most part identical to the headache classification of the International Headache Society. Both coincide in their classification of the so-called primary headache disorders: migraine, tension-type headache, cluster headache and other headaches without structural lesions.

However, the categorization of post-traumatic headache in the ICD-NA is not very satisfactory. Category G44.3 can only be used for chronic post-traumatic headache and not for headache associated with acute head trauma. Therefore a subcategory has been created within category G44.8 (other headache syndromes) for acute post-traumatic headache.

By using multiple coding in ICD-NA, a classification of symptomatic headaches is possible, and identical in both classification systems. For some forms of headache, the ICD offers a more detailed classification, e.g. for headaches associated with non-cephalic infection. Here the ICD-NA makes an exact naming of the agent possible. However, the IHS Classification gives more precise details about the headache characteristics by allowing the additional entering of the phenomenological headache types for each headache diagnosis, with the addition of a fourth digit to the code.

Although for future classifications an adjustment of the structural order of the two classification systems would be desirable, it should be recognized that there are certain constraints concerning the structure of the ICD-10 where *all* disorders have to be ordered as logically as possible.

A listing of general rules for using the headache classification, both in the ICD and in the IHS Classification, can be found in the introductory part of Section Ib. Below, rules are listed which apply specifically to the IHS Classification; they should be seen in conjunction with the rules given in Section Ib.

Rules for using the codes of the classification of the International Headache Society:

1. Diagnostic criteria given at the one- or two-digit level must generally be met by the subtypes, but exceptions or more specific criteria are listed under the subforms.
2. Patients who for the first time develop a particular form of headache in close temporal connection with the onset of one of the disorders listed in groups 5–11 are coded to these groups using the fourth character to specify the type of the headache. Pre-existing migraine, tension-type headache or cluster headache aggravated in close temporal connection with one of the disorders listed in groups 5–11 are still coded as migraine, tension-type headache or cluster headache (groups 1–3). If the number of headache days increases by 100% or more, the aggravating factor may be mentioned in parentheses, but there is no separate code provided for its recording.
3. Code to the degree of specificity (number of digits) which suits one's purpose.
4. If one headache type fits the diagnostic criteria for different categories of headache, code to the first headache category in the classification for which the criteria are fulfilled; the rest-categories 1.7, 2.3 and 3.3 are not regarded as diagnoses if the headache also fulfils another diagnosis.
5. If a fourth digit is to be used in association with a diagnosis at the two-digit level, insert 0 as the third digit. Example: 5.1 Acute post-traumatic headache fulfilling criteria for migraine is coded 5.1.0.1.

List of fourth digits for headache types according to the IHS Classification*Comment*

Included are as many forms of headache as can be distinguished using only headache characteristics and operational criteria. Most forms are also found elsewhere in the IHS Classification.

0. Headache fulfilling the criteria as specified for the particular disorder*Comment*

For some disorders in groups 5–11, headache characteristics are not part of the diagnostic criteria; for some they are. Fourth digit 0 applies only to the latter.

1. Migraine*Diagnostic criteria*

Fulfilling criteria for 1.1 (migraine without aura) or 1.2 (migraine with aura) with the exception that migraine occurs for the first time in close temporal connection with one of the disorders listed in groups 5–11.

2. Tension-type headache*Diagnostic criteria*

Fulfilling criteria for 2.1 (episodic tension-type headache associated with disorder of pericranial muscles) or 2.2 (episodic tension-type headache without disorder of pericranial muscles) with the exception that tension-type headache occurs for the first time in close temporal connection with one of the disorders listed in groups 5–11.

3. Cluster headache*Diagnostic criteria*

Fulfilling criteria for one type of cluster headache or chronic paroxysmal hemicrania with the exception that cluster headache or chronic paroxysmal hemicrania occur for the first time in close temporal connection with one of the disorders listed in groups 5–11.

4. Increased intracranial pressure type

Example: brain tumour headache.

Diagnostic criteria

- A. Crescendo time profile over 3 months or less.
- B. Bilateral headache of moderate or severe intensity.
- C. The headache occurs in the morning or after napping and remits or improves spontaneously after getting up.
- D. The headache is present on at least 50% of all mornings.

5. Decreased intracranial pressure type

Example: post-lumbar puncture headache.

Diagnostic criteria

- A. Bilateral headache.
- B. The headache is absent or mild in the recumbent position and occurs or worsens markedly in the upright position.

6. Local lesion type

Example: pain from bone metastasis.

Diagnostic criteria

- A. Headache is non-pulsating and constantly present.

- B. The pain has a distinct maximum in a circumscribed area of 5 cm or less, but may irradiate to surroundings or refer to more distant areas.

7. Vasodilator type

Example: nitroglycerin-, histamine- and prostacyclin-induced headache.

Diagnostic criteria

- A. Bifronto-temporal pulsating pain.
- B. There is no aura, nausea or vomiting.

8. Stabbing type [ice-pick type]

- A. Stabbing head pains lasting less than a second.
- B. The pain occurs as single stabs or a series of stabs.
- C. Each stab or series of stabs occurs in a small, sharply localized area.

9. Other type (specify)

10. Two or more types (specify)

Conversion table between the codes of the IHS Classification and ICD-10, ICD-NA

	IHS code	
	Etiological code	Headache code
1. Migraine		G43
1.1 Migraine without aura		G43.0
1.2 Migraine with aura		G43.1
1.2.1 Migraine with typical aura		G43.10
1.2.2 Migraine with prolonged aura		G43.11
1.2.3 Familial hemiplegic migraine		G43.1x5 ¹
1.2.4 Basilar migraine		G43.1x3 ¹
1.2.5 Migraine aura without headache		G43.1x4 ¹
1.2.6 Migraine with acute onset aura		G43.12
1.3 Ophthalmoplegic migraine		G43.80
1.4 Retinal migraine		G43.81
1.5 Childhood periodic syndromes that may be precursors to or associated with migraine		G43.82
1.5.1 Benign paroxysmal vertigo of childhood		G43.821
1.5.2 Alternating hemiplegia of childhood		G43.822
1.6 Complications of migraine		G43.3
1.6.1 Status migrainosus		G43.2
1.6.2 Migrainous infarction		G43.3
1.7 Migrainous disorder not fulfilling above criteria		G43.9
2. Tension-type headache		G44.2
2.1 Episodic tension-type headache		
2.1.1 Episodic tension-type headache associated with disorder of pericranial muscles		G44.20
2.1.2 Episodic tension-type headache unassociated with disorder of pericranial muscles		G44.21
2.2 Chronic tension-type headache		
2.2.1 Chronic tension-type headache associated with disorder of pericranial muscles		G44.22
2.2.2 Chronic tension-type headache unassociated with disorder of pericranial muscles		G44.23
2.3 Headache of the tension-type not fulfilling criteria		G44.28
3. Cluster headache and chronic paroxysmal hemicrania		
3.1 Cluster headache		G44.0
3.1.1 Cluster headache periodicity undetermined		G44.00
3.1.2 Episodic cluster headache		G44.01
3.1.3 Chronic cluster headache		G44.02
3.1.3.1 Unremitting from onset		G44.020
3.1.3.2 Evolved from episodic		G44.021
3.2 Chronic paroxysmal hemicrania		G44.03
3.3 Cluster headache-like disorder not fulfilling above criteria		G44.08

¹ In categories G43.1x3, G43.1x4 and G43.1x5 the fifth character should be chosen as follows: 0=migraine with typical aura; 1=migraine with prolonged aura; 2=migraine with acute onset aura.

IHS code	ICD-10 code	
	Etiological code	Headache code
4. Miscellaneous headaches unassociated with structural lesion		G44.80
4.1 Idiopathic stabbing headache		G44.800
4.2 External compression headache		G44.801
4.3 Cold stimulus headache		G44.802
4.3.1 External application of a cold stimulus		G44.8020
4.3.2 Ingestion of a cold stimulus		G44.8021
4.4 Benign cough headache		G44.803
4.5 Benign exertional headache		G44.804
4.6 Headaches associated with sexual activity		G44.805
4.6.1 Dull type		G44.8050
4.6.2 Explosive type		G44.8051
4.6.3 Postural type		G44.8052
5. Headache associated with head trauma		G44.88
5.1 Acute post-traumatic headache		G44.880
5.1.1 With significant head trauma and/or confirmatory signs	S06	G44.880
5.1.2 With minor head trauma and no confirmatory signs	S09.9	G44.880
5.2 Chronic post-traumatic headache		G44.3
5.2.1 With significant head trauma and/or confirmatory signs	S06	G44.30
5.2.2 With minor head trauma and no confirmatory signs	S09.9	G44.31
6. Headache associated with vascular disorders		G44.81
6.1 Acute ischaemic cerebrovascular disease	I63	G44.810
6.1.1 Transient ischaemic attack (TIA)	G45	G44.810
6.1.2 Thromboembolic stroke	I64	G44.810
6.2 Intracranial haematoma	I62	G44.810
6.2.1 Intracerebral haematoma	I61 ²	G44.810
6.2.2 Subdural haematoma	I62.0 ³	G44.810
6.2.3 Epidural haematoma	I62.1 ⁴	G44.810
6.3 Subarachnoid haemorrhage	I60 ⁵	G44.810
6.4 Unruptured vascular malformation	Q28	G44.811
6.4.1 Arteriovenous malformation	Q28.2	G44.811
6.4.2 Saccular aneurysm	Q28.3	G44.811
6.5 Arteritis	M31	G44.812
6.5.1 Giant cell arteritis	M31.6	G44.812
6.5.2 Other systemic arteritides	I68.2	G44.812
6.5.3 Primary intracranial arteritis	I67.7	G44.812

² Code I61 applies to *nontraumatic* intracerebral haematoma. Traumatic intracerebral haematoma is coded as S06.3.

³ Code I62.0 applies to *nontraumatic* subdural haematoma. Traumatic subdural haematoma is coded as S06.5.

⁴ Code I62.1 applies to *nontraumatic* subdural haematoma. Traumatic subdural haematoma is coded as S06.4.

⁵ Code I60 applies to *nontraumatic* subarachnoid haemorrhage. Traumatic subarachnoid haemorrhage is coded as S06.6.

IHS code	ICD-10 code	
	Etiological code	Headache code
6.6 Carotid or vertebral artery pain	I63.0, I63.2, I65.0, I65.2 or I67.0	G44.810
6.6.1 Carotid or vertebral dissection	I67.0	G44.810
6.6.2 Carotidynia (idiopathic)		G44.806
6.6.3 Post endarterectomy headache	I97.8	G44.814
6.7 Venous thrombosis (cerebral)	I63.6	G44.810
6.8 Arterial hypertension	I10	G44.813
6.8.1 Acute pressor response to exogenous agent	I15	G44.813
6.8.2 Pheochromocytoma	D35.0 ⁶	G44.813
6.8.3 Malignant (accelerated) hypertension	I10	G44.813
6.8.4 Pre-eclampsia and eclampsia	O13; O14; O15	G44.813
6.9 Headache associated with other vascular disorder	additional code for etiology	G44.818
7. Headache associated with non-vascular intracranial disorder		G44.82
7.1 High cerebrospinal fluid pressure		G44.820
7.1.1 Benign intracranial hypertension	G93.2	G44.820
7.1.2 High pressure hydrocephalus	G91.8	G44.820
7.2 Low cerebrospinal fluid pressure		G44.820
7.2.1 Post-lumbar puncture headache	G97.0	G44.820
7.2.2 Cerebrospinal fluid fistula headache	G96.0	G44.820
7.3 Intracranial infection	G00–G09	G44.821
7.4 Intracranial sarcoidosis and other non-infectious inflammatory diseases	D86 additional code for etiology	G44.823 G44.823
7.5 Headache related to intrathecal injections	G97.8	G44.824
7.5.1 Direct effect	T80.8	G44.824
7.5.2 Due to chemical meningitis	G03.8	G44.824
7.6 Intracranial neoplasm	C00–D48	G44.822
7.7 Headache associated with other intracranial disorder	additional code for etiology	G44.828
8. Headache associated with substances or their withdrawal⁷		G44.4 or G44.83
8.1 Headache induced by acute substance use or exposure ⁷		G44.4 or G44.83
8.1.1 Nitrate/nitrite-induced headache	X44	G44.400
8.1.2 Monosodium glutamate-induced headache	X44	G44.401
8.1.3 Carbon monoxide-induced headache	T58	G44.402
8.1.4 Alcohol-induced headache	F10.0	G44.83
8.1.5 Other substances ⁷	additional code to specify substance	G44.4 or G44.83

⁶ Code D35.0 applies to *benign* pheochromocytoma, site unspecified. Malignant pheochromocytoma, site unspecified, is coded as C74.1.

⁷ In ICD-10 substances are classified according to the presence or absence of a dependence-producing property. Headaches associated with psychoactive substances (dependence-producing) are classified in G44.83 with an additional code to indicate the nature of the disorder related to the substance use, e.g. intoxication (F1x.0), dependence (F1x.2), withdrawal (F1x.3), etc. The third character can be used to indicate the specific substance involved, e.g. F10 for alcohol, F15 for caffeine, etc.

Abuse of non-dependence-producing substances is classified in F55, with a fourth character to indicate the substance, e.g. F55.2. Abuse of analgesics.

Headaches related to non-dependence-producing substances are classified in category G44.4

IHS code	ICD-10 code	
	Etiological code	Headache code
8.2 Headache induced by chronic substance use or exposure		
8.2.1 Ergotamine-induced headache	Y52.5	G44.412
8.2.2 Analgesics abuse headache	F55.2	G44.410
8.2.3 Other substances ⁷	additional code to specify substance	G44.4 or G44.83
8.3 Headache from substance withdrawal (acute use)		
8.3.1 Alcohol withdrawal headache (hangover)	F10.3	G44.83
8.3.2 Other substances ⁸	additional code to specify substance	G44.4 or G44.83
8.4 Headache from substance withdrawal (chronic use)		
8.4.1 Ergotamine withdrawal headache	Y52.5	G44.413
8.4.2 Caffeine withdrawal headache	F15.3	G44.83
8.4.3 Narcotics abstinence headache	F13.3	G44.83
8.4.4 Other substances ⁸	additional code to specify substance	G44.4 or G44.83
8.5 Headache associated with substances, but with uncertain mechanism		
8.5.1 Birth control pills or estrogens	Y42.4	G44.418
8.5.2 Other substances ⁸	additional code to specify substance	G44.4 or G44.83
9. Headache associated with non-cephalic infection	A00–B97 ⁹	G44.881
9.1 Viral infection	additional code for etiology	G44.881
9.1.1 Focal non-cephalic		
9.1.2 Systemic		
9.2 Bacterial infection	additional code for etiology	G44.881
9.2.1 Focal non-cephalic		
9.2.2 Systemic (septicaemia)		
9.3 Headache related to other infection	additional code for etiology	G44.881
10. Headache associated with metabolic disorder		G44.882
10.1 Hypoxia		G44.882
10.1.1 High altitude headache	W94	G44.882
10.1.2 Hypoxic headache (low pressure environment, pulmonary disease causing hypoxia)	additional code for etiology	G44.882
10.1.3 Sleep apnoea headache	G47.3	G44.882
10.2 Hypercapnia (hyperventilation)	R06.4	G44.882

⁸ See footnote 7.

⁹ Section II of this book provides a limited listing of infectious agents. If desired, the ICD-10 or ICD-NA, second edition, may be consulted for a more detailed listing of viral and bacterial diseases.

IHS code	ICD-10 code	
	Etiological code	Headache code
10.3 Mixed hypoxia and hypercapnia	R06.4 plus additional code for etiology	G44.882
10.4 Hypoglycaemia	E16	G44.882
10.5 Dialysis	Y84.1	G44.882
10.6 Headache related to other metabolic abnormality	additional code for etiology	G44.882
11. Headache or facial pain associated with disorder of cranium, neck, eyes, ears, nose, sinuses, teeth, mouth or other facial or cranial structures		G44.84
11.1 Cranial bone	M80–M89.8	G44.840
11.2 Neck		
11.2.1 Cervical spine	M99	G44.841
11.2.2 Retropharyngeal tendinitis	M79.8	G44.842
11.3 Eyes		
11.3.1 Acute glaucoma	H40	G44.843
11.3.2 Refractive errors	H52	G44.843
11.3.3 Heterophoria or heterotropia	H50.3–H50.5	G44.843
11.4 Ears	H60–H95	G44.844
11.5 Nose and sinuses		
11.5.1 Acute sinus headache	J01	G44.845
11.5.2 Other diseases of nose or sinuses	J34	G44.845
11.6 Teeth, jaws and related structures	K00–K14	G44.846
11.7 Temporomandibular joint disease (functional disorders are coded to group 2)	K07.6	G44.846
12. Cranial neuralgias, nerve trunk pain and deafferentation pain		G44.847, G44.848 or G44.85
12.1 Persistent (in contrast to tic-like) pain of cranial nerve origin		G44.848
12.1.1 Compression or distortion of cranial nerves and second or third cervical roots	additional code for etiology	G44.848 plus G53.8*, resp. G55*
12.1.2 Demyelination of cranial nerves	G35–G37	G44.848
12.1.2.1 Optic neuritis (retrobulbar neuritis)	H46	G44.848
12.1.3 Infarction of cranial nerves	additional code for etiology	G44.848 plus G53.8*
12.1.3.1 Diabetic neuritis	E10–E14	G44.848 plus G53.8*
12.1.4 Inflammation of cranial nerves		
12.1.4.1 Acute herpes zoster	B02.2	G44.881
12.1.4.2 Chronic post-herpetic neuralgia	B02.2 +	G44.847 plus G53.0*

IHS code	ICD-10 code	
	Etiological code	Headache code
12.1.5 Tolosa-Hunt syndrome		G44.850
12.1.6 Neck-tongue syndrome		G44.851
12.1.7 Other causes of persistent pain of cranial nerve origin	additional code for etiology	G44.848
12.2 Trigeminal neuralgia		G44.847
12.2.1 Idiopathic trigeminal neuralgia	G50.00	G44.847
12.2.2 Symptomatic trigeminal neuralgia	G50.09 ¹⁰	G44.847
12.2.2.1 Compression of trigeminal root or ganglion	G53.80* plus additional code for etiology	G44.848
12.2.2.2 Central lesions	G53.80* plus additional code for etiology	G44.848
12.3 Glossopharyngeal neuralgia		
12.3.1 Idiopathic glossopharyngeal neuralgia	G52.10	G44.847
12.3.2 Symptomatic glossopharyngeal neuralgia	G53.830* plus additional code for etiology	G44.847
12.4 Nervus intermedius neuralgia	G51.80	G44.847
12.5 Superior laryngeal neuralgia	G52.20	G44.847
12.6 Occipital neuralgia	G52.80	G44.847
12.7 Central causes of head and facial pain other than tic douloureux		
12.7.1 Anaesthesia dolorosa	G50.09 or G52.800* plus additional code for etiology	G44.847
12.7.2 Thalamic pain	G46.21	G44.810
12.8 Facial pain not fulfilling criteria in groups 11 and 12	G50.1	G44.847
13. Headache not classifiable		R51

¹⁰ Code F50.09 should *not* be used if the underlying cause of the trigeminal neuralgia is known. In that case the asterisk code G53.800 should be used with a dagger code to indicate the etiology.