



## University of Calgary Headache Fellowship Core Curriculum

The fellowship core curriculum is designed to cover a comprehensive range of concepts and skills relevant to headache assessment and management. A headache fellowship core curriculum includes:

1. Headache disorder diagnosis, classification, and epidemiology
  - The classification and taxonomy of various headache disorders, including primary and secondary headache disorders, and craniofacial pain syndromes, as laid out by the International Classification of Headache Disorders 3<sup>rd</sup> edition.
  - The epidemiology and pathophysiology of common primary and secondary headache disorders and cranial neuralgias.
2. Clinical assessment
  - Comprehensive assessment of patients with headache disorders, including history-taking, physical examination, and interpretation of diagnostic tests.
  - Practical approach and differentiation among primary and secondary headache disorders as well as craniofacial pain syndromes.
  - Familiarity with pediatric headache variants, uncommon headache disorders and rare craniofacial pain syndromes.
3. Treatment Modalities
  - Comprehensive pharmacological and non-pharmacological treatment options for headache disorders and craniofacial pain syndromes.
  - Management strategies for acute and chronic headaches.
  - Management of co-morbid conditions in headache patients with a multidisciplinary approach.
  - Management of headache conditions in the emergency department and inpatient settings.
  - Triaging headache patients, transition of care from Pediatric population, and transition of care to community settings.
4. Procedures and interventions
  - Application of procedural interventions such as nerve blocks, injections, and other interventional therapies for headache relief.
5. Emerging therapies
  - Awareness of emerging therapies, including new medications and technologies in the field of headache medicine.
6. Patient education
  - Comprehensive education to patients about their headache diagnosis, treatment options, and the interplay between headache disorders and co-morbidities, emphasizing self-management strategies.

## 7. Research and registry

- Research design, methodologies, and statistical analysis relevant to headache research as well as ethical considerations and principles in clinical research. Fellows will need to complete Good Clinical Practice (GCP-ICH) training as part of their research component. This provides training on the ethical conduct of research in humans.
- Effective utility of headache registries for patient care and research purposes.

## Curriculum topics

1. Headache disorder classification
  - The International Classification of Headache Disorders (ICHD-III)
2. Epidemiology and pathophysiology of common headache disorders
  - Migraine
  - Tension-type headache
  - Trigeminal autonomic cephalalgias
  - Trigeminal neuralgia
3. Diagnosis and management of primary headache disorders
  - Migraine
  - Tension-type headache
  - Trigeminal autonomic cephalalgias
  - Other primary headache disorders
4. Diagnosis and management of secondary headache disorders
  - Headache attributed to
    - trauma or injury to the head and/or neck
    - cranial or cervical vascular disorder
    - non-vascular intracranial disorder
    - a substance or its withdrawal
    - infection
    - homeostasis
    - disorder of the cranium, neck, eyes, ears, nose, sinuses, teeth, mouth or other facial or cervical structure
    - psychiatric disorder
5. Diagnosis and management of craniofacial pain syndromes
  - Pain attributed to a lesion or disease of the cranial nerves.
    - Trigeminal nerve
    - Glossopharyngeal nerve
    - Nervus intermedius
    - Occipital nerve
  - Other facial pain including persistent idiopathic facial pain.
6. Genetics and primary headache disorders
7. Neuroimaging modalities (including CT, MR, Myelography, vascular imaging) and other diagnostic modalities (such as lumbar puncture, visual field tests, OCT, etc).

## 8. Interventions and neurostimulation devices

- Interventions
  - Peri-cranial nerve blocks
  - Onabotulinumtoxin A injections for various headache conditions
  - Trigger point injections
- Neurostimulation devices
  - Transcutaneous supraorbital nerve stimulation (Cefaly device)
  - Non-invasive vagal nerve stimulation (Gamma-core device)
  - Occipital nerve stimulation
  - Sphenopalatine ganglion stimulation
  - Single pulse transcranial magnetic stimulation (sTMS)
  - Remote electrical neurostimulation (REN)

## 9. General headache management

- Behavioral management of headache
- Management of headache co-morbidities
- Novel and emerging therapies in headache

## 10. Management of headache disorders in specific circumstances.

- Headaches in women including during perimenopause and menopause
- Headaches in pregnancy and lactation
- Headaches in the elderly population
- Status migrainosus in the outpatient setting
- Emergency department and inpatient management of primary and secondary headache disorders including thunderclap headache
- Longitudinal management of pediatric headache disorders in the adult setting

## 11. Research and registry

- Landmark headache literature and publications
- Upcoming and ongoing local and international research trials
- Design and data collection of a Headache registry
- Data collection for the Spontaneous intracranial hypotension registry