# Endodontics

**National Dental Examining Board of Canada (NDEB) Virtual OSCE and Assessment of Fundamental Knowledge (AFK)**

About 10% of the Virtual OSCE · 4 topics · 2026 blueprint

Endodontics covers diagnosis of pulpal and periapical disease, root canal treatment and retreatment, vital pulp therapy, and management of dental trauma. It is about 10% of the Virtual OSCE in NDEB's 2026 blueprint. Questions ask you to combine history, pulp and periapical tests and radiographs into a two part diagnosis, then pick the right treatment, emergency care, antibiotic decision and follow up.

**You should be able to:** A healthy patient has a localized fluctuant swelling over 36, which is necrotic, with no fever. Should you prescribe an antibiotic?

## Every topic: the key point and the trap

### EN-1 Pulpal and periapical diagnosis

Every endodontic diagnosis has two parts: a pulpal diagnosis (normal, reversible pulpitis, symptomatic or asymptomatic irreversible pulpitis, necrosis, previously treated, previously initiated) and an apical diagnosis.

**Trap:** Assuming the tooth nearest the sinus opening is the cause. Trace the tract with gutta-percha; the source may be a neighbouring tooth.

### EN-2 Emergency care and antibiotics

Symptomatic irreversible pulpitis is relieved by pulpotomy or pulpectomy; antibiotics do not relieve pulpitis pain and are not indicated.

**Trap:** Prescribing antibiotics for irreversible pulpitis or a localized abscess in a healthy patient. They do not help pain and drive resistance; drainage and debridement are the treatment.

### EN-3 Root canal treatment essentials

Rubber dam isolation is the standard of care for root canal treatment; it prevents contamination and protects the airway from instruments and irrigant.

**Trap:** Going straight to apical surgery for failed treatment when the canals can be accessed. Nonsurgical retreatment addresses the cause inside the canal and is usually first.

### EN-4 Vital pulp therapy and trauma

In an immature permanent tooth with a vital pulp, the goal is to keep the pulp alive so the root keeps forming (apexogenesis) using pulp capping or partial pulpotomy with a calcium silicate cement.

**Trap:** Replanting an avulsed primary incisor. It risks injury to the permanent successor; primary avulsions are not replanted.

## Key terms

**Reversible pulpitis:** Mild pulp inflammation with short pain to stimuli that goes away when the cause is removed.

**Symptomatic irreversible pulpitis:** Pulp inflammation with lingering or spontaneous pain that will not heal; treated by pulp removal.

**Pulp necrosis:** Death of the pulp; no response to sensibility tests.

**Chronic apical abscess:** Apical infection with gradual onset, little or no discomfort and intermittent drainage through a sinus tract.

**Condensing osteitis:** Diffuse radiopaque bone reaction at the apex of a tooth, usually from low grade inflammation.

**Working length:** The distance from a coronal reference point to where canal preparation and filling should end.

**MB2:** The second mesiobuccal canal frequently present in maxillary first molars.

**Apexogenesis:** Vital pulp therapy that allows continued root development in an immature tooth.

**Apexification:** Creating an apical barrier in an immature tooth with a necrotic pulp.

**Hanks balanced salt solution:** A storage medium that keeps periodontal ligament cells of an avulsed tooth alive.

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