

Cusp replacement

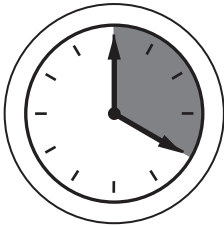
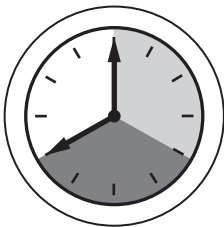
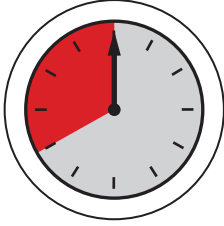
	Types of learning	Resources	UK General Dental Council learning outcome(s)*	Session learning outcome(s)
Session			1.14.4 1.14.5 1.14.1	Prepare and restore a molar tooth with a single cusp removed, with amalgam and composite
	Didactic elements	Chapter 14		Discuss solutions to problems of retention with large amalgams
	Learner-centred		1.1.10 1.1.9	List suitable alternatives to large amalgam restorations
	Reflective			Derive a planned approach to replacing a cusp with amalgam
	Critical appraisal			Discuss criteria for ideal cusp replacement with amalgam
	Peer review		1.1.1	Choose from and implement suitable additional forms of retention for amalgam cusp replacements

* - black (dentists), blue (therapists)

Teaching notes

KEY POINTS:

- ✓ This practical develops skills in managing large amounts of direct filling material within a relatively short working time (amalgam)
- ✓ It is imperative that the students develop a planned and systematic approach to material placement and contouring

	<ul style="list-style-type: none"> • Discuss restoration with large amounts of tooth surface loss, including indirect restorations. • Demonstrate preparing a cusp replacement cavity by first cutting an approximal box and class 1 fissure preparation (go back to basics here and check with peer review). Then remove the mesio-buccal cusp level with the base of the box, and just past the first buccal groove. • Demonstrate placement without adding retention features – show a systematic approach to carving, and encourage vision from all angles. Carve the mid buccal first using natural tissue. Mark the cuspal tip positions and work down into a central fissure. The cusp tips are not at the <i>edge</i> of the tooth – see Frasco models. The matrix band height should also correlate with the expected height of the marginal ridge. • Demonstrate how easily the set restoration is lost with oblique force, and further discuss the need for extra retention form.
	<ul style="list-style-type: none"> • Students to prepare natural tooth 37 and have it checked. • Discuss the need for retention form and demonstrate the placement of slots/grooves • Students to cut and restore teeth 37, 26 and 47.
	<ul style="list-style-type: none"> • Engage with peer review and critical appraisal • Discuss the importance of toggle position on the matrix and the effects of this and careless removal on the final amalgam contour

Cusp replacement assessment criteria

- Well condensed, no voids
- Contact point re-established
- Reproduces morphology
- No ledges
- Not overfilled/flash
- Smooth matt finish
- Appropriate cusp height/position for occlusion