





CLASSIFICATION OF LONGITUDINAL TOOTH FRACTURES					
	CRAZE LINE	FRACTURED CUSP	CRACKED TOOTH	SPLIT TOOTH	VERTICAL ROOT FRACTURE
					
<b>Location</b>	Enamel only Common on marginal ridges	Crown and cervical margin of root	Crown only or crown to root extension (depth varies)	Crown and root; extension to proximal surfaces	Root only
<b>Direction</b>	Occlusogingival	Mesiodistal and faciolingual	Mesiodistal	Mesiodistal	Faciolingual
<b>Origination</b>	Occlusal surface	Occlusal surface	Occlusal surface	Occlusal surface	Root (any level)
<b>Etiologies</b>	Occlusal forces, thermocycling	Undermined cusp, damaging habits	Damaging habits, weakened tooth structure	Damaging habits, weakened tooth structure	Wedging posts, obturation forces, excessive root-dentin removal
<b>Symptoms</b>	Asymptomatic	Sharp pain with mastication and with cold	Highly variable	Pain with mastication	None to slight
<b>Signs</b>	None	None of significance	Variable	Separable segments, periodontal abscess	Variable
<b>Identification</b>	Direct visualization, transillumination	Visualize, remove restoration	Biting, remove restoration	Remove restoration	Reflect flap and transilluminate

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<b>Diagnostic Tests</b>	None	Visible fractures of cusps, biting test, transillumination	Transillumination, staining, wedge segments (unseparable), isolated/narrow perio probing, biting test, magnification	Wedge segments (separable)	Reflect flap and transilluminate
<b>Treatment</b>	No treatment needed, esthetic	Remove cusp and/or restore	Root canal treatment depends on pulpal and periapical diagnosis; restore with full cuspal coverage	Variable, must remove one segment, restore or extract	Remove tooth or fractured root; consider fixed and/or removable bridge, or implant
<b>Prognosis</b>	Very good	Very good	Always questionable to poor	Hopeless (if maintain intact) Variable (if remove segment)	Hopeless for fractured root
<b>Prevention</b>	None needed	Place conservative class II restorations; coronal protection (onlay undermined cusps)	Eliminate damaging habits (ice chewing, etc.); coronal protection (onlay undermined cusps)	Eliminate damaging habits; coronal protection (onlay cusps)	Minimize root dentin removal; avoid wedging posts; reduce condensation forces; use of carbon fiber posts

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