

fundamentals of instrumentation

Stabilization = correct grasp and fulcrum more bends in the shank, more area specific

instruments ADAPTATION, ANGULATION, ACTIVATION

indicates the specific design of the working end and the area of the dentition indicated for use

area specific	only adapts to certain surfaces in certain areas of the mouth
universal	used on any area of the mouth (both anterior and posterior)
weight	lighter handles enhance TACTILE SENSITIVITY and lessen fatigue related to a tighter grasp, ideally less than 15.0g
diameter	6.5mm- 10mm. thin handles can lead to RSI (repetitive stress injury). ergonomic instruments have 10mm diameter
texture	textured provide better control, increase tactile sensitivity
shape	straight: anterior teeth. angled complex: proximal surfaces of posterior teeth
length	most instruments: 35-40mm
rigidity	stronger: remove calculus. flexible: remove fine deposits of calculus

PROBING

Design, Characteristics	calibrated in millimeter increments (NOT all probes have the same marking patterns)
	blunt, rod-shaped working that may be circular or rectangular in cross section
	working-end and the shank meet in defined angle that is >90 degrees
	stainless steel, titanium or plastic
Function	MAIN detect periodontal pockets to determine the health status of the periodontist
	measure clinical attachment loss
	measure extent of recession of the gingival margin
	measure the width of the attached gingiva
	measure the size of intramural lesions
	assess bleeding on probing



PROBING (cont)

determine mucogingival relationship

monitoring the response of the periodontium to treatment

Probing depth the distance in millimeters from the gingival margin to the base of the sulcus or periodontal pocket as measures with a probe

Base of sulcus is at the *junctional epithelium*

round up to nearest full millimeter

Healthy State 1-3 mm

the probe touches the tooth near the CEJ at the JE

Disease State greater than 3 mm

probe tip touches somewhere below the CEJ

MIRROR

function of the mirror 1. indirect vision to see tooth surfaces or intramural structures that CANNOT be seen using direct vision

2. retraction hold the pt's cheek, lip or tongue see tooth surfaces

3. indirect illumination reflect light onto a tooth surface in a dark area o the mouth

4. transillumination directing light off to the mirror surface and through the ANTERIOR TEETH (helps aid in detection of inter proximal caries) LOOKING DIRECTLY ON THE TOOTH

CLASSIFICATION OF INSTRUMENTS	
assessment	mirror, explorer, probes
treatment	scalers, hoes, chisels, files, curets (universal/area specific), powered scalers

N137 SCALER	
crowns ONLY	
Universal in design, area specific in use	
anterior ONLY (sextant 5 mostly)	
all surfaces (BEST in proximal surfaces)	

N137 CURET	
BOTH crowns and roots	
Universal in design, area specific in use	
Anteriors	
ALL SURFACES	

204SD "small and dainty"	
Scaler	
Crowns ONLY	
Universal	
BOTH anterior and posterior	
ALL SURFACES (BEST in proximal premolar and anterior)	

N135	
scaler	
crowns ONLY	
universal	
BOTH posterior and anterior	
ALL SURFACES (BEST in proximal of posterior)	

Columbia 13/14	
curet	
crown and roots	
universal	
BOTH posterior and anterior	
ALL surfaces	

Gracey 11/12	
curet	
crowns and roots	
area specific	
posterior ONLY	
lingual, medial, buccal (everything but the distal)	
outer working edge- fattest from the handle	

Gracey 13/14	
curet	
crowns and root	
area specific	
posterior ONLY	
distal surfaces ONLY	
inner edge- closest to the handle	

Gingival Pocket	
Gingival enlargement and coronal migration of the gingival margin	
No loss of clinical connective tissue attachment	
Junctional epithelium has not migrated apically	

Periodontal Pocket	
A gingival sulcus that has been deepened by disease; depth is greater than 3mm	
Forms from apical migration of the junctional epithelium and of periodontal fibers	

EXPLORER	
Function	determine the health of the periodontal tissues, tooth anatomy and the texture of tooth surfaces. detect by TACTILE means, the texture and character if tooth surfaces debone during and after periodontal instrumentation to assess the programs and completeness of instrumentation
Design	flexible metal conduct vibrations form the working end to the clinicians fingers. working- end is 1 to 2 mm in length and referred to as the explorer tip
11/12 Explorer	side of the explorer tip is applied to the tooth surface
Surface Assessment	supragingival (above the gingival) subgingival (below the in the gingival margin)
Explorer Types	Shepard hook, straight, curved, pigtail and cowhorn, orban-type, 11/12 type

