Periodontal Instruments

got teeth?

(thank your dental hygienist)

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Objectives

1.Identify the parts of the periodontal instrument.

2.Classify the two primary use of the periodontal instruments.

3.Describe the use of the specialized periodontal instrument.

4.Distinguish the differences between the types of periodontal instruments.

5.Demonstrates the advantages of the hand scaler and ultrasonic scaler.

Periodontal instruments

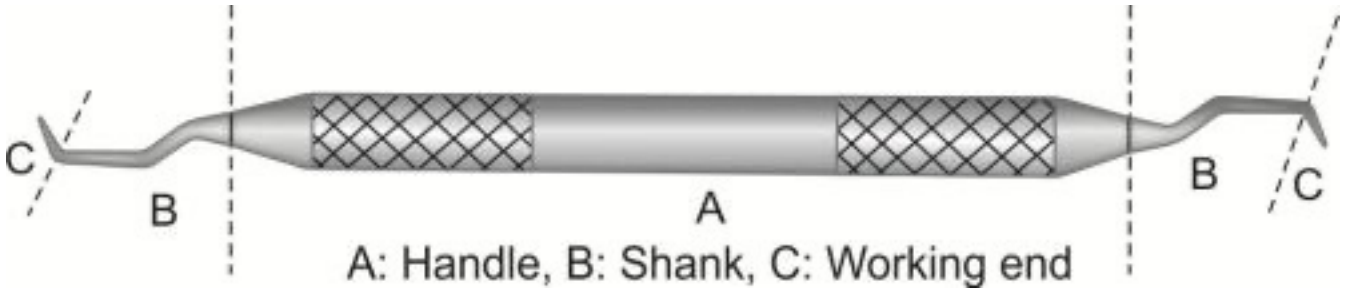
Periodontal instruments are designed to remove calculus, root planning surfaces, curetting the gingiva, and remove diseased tissue.
It is performed for supra and subgingival, and it can be done using a non-surgical or surgical approach.

Periodontal instruments can be divided into:

- Assessment Instruments.
- Therapeutic Instruments.

PARTS OF THE PERIODONTAL INSTRUMENT

- **Handle :** For holding the instrument.
- **Shank :** Located between the handle and the working-end.
- **Working-End:** The part that does the work.



A: Handle, B: Shank, C: Working end

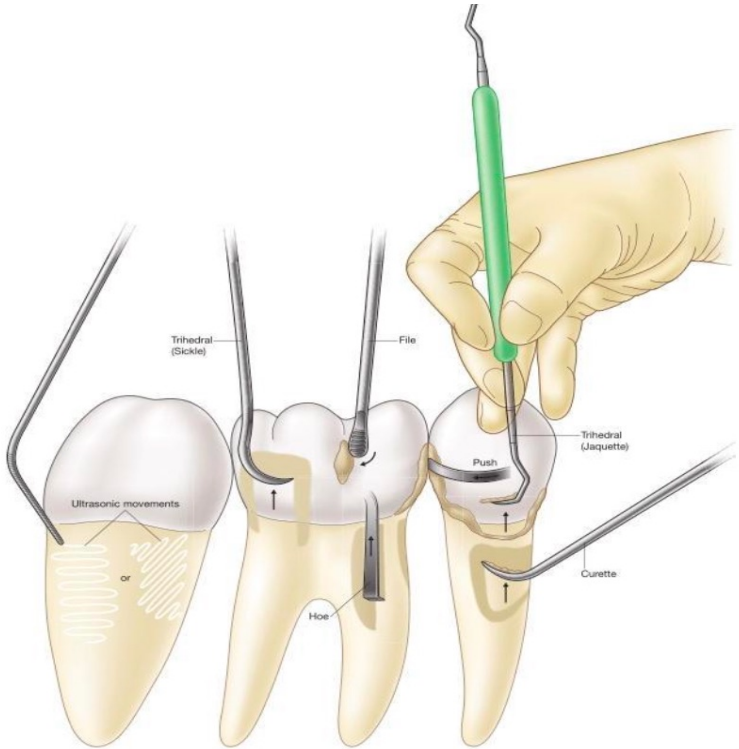
Single ended and Double- ended Designed

- **Single-ended instruments** are less efficient to use because the clinician must stop more often to lay down one instrument and pick up another.

- **Double-ended instruments** allow the clinician to simply flip the instrument to use the other working-end.

Use of periodontal instruments for Dental hygiene:

- Remove calculus
- Smooth root surfaces
- Measure periodontal pockets



Classifications of Periodontal Instruments:

Therapeutic Instruments

- Periodontal Scalers
- Periodontal Curettes
- Periodontal Files
- Ultrasonic

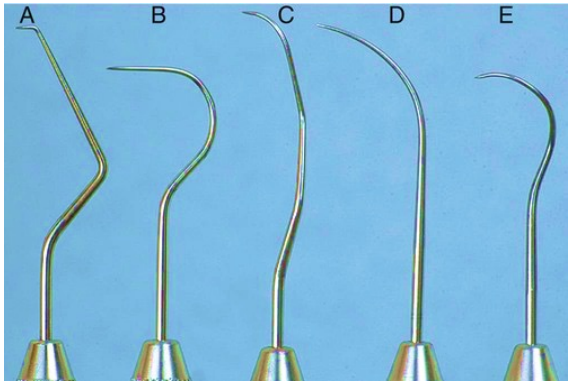
Assessment Instruments

- Periodontal Explorers
- Periodontal Probes

Periodontal Explorers

- Has thin working ends to adapt around root surfaces easily
- offers perfect tactile information on the location of subgingival calculus deposits

- Used For :



- Locate supragingival and the subgingival calculus deposits
- Check the roughness or smoothness of the root surfaces

Periodontal Probes:

- Marked in millimeter.
- Tapered to fit into the gingival sulcus and has rounded tip not to injure the soft tissues
- Measure the depth of gingival sulcus and periodontal pockets
- Measure clinical attachment levels.

Types of Periodontal probes

Williams Probe

Marquis color coded probe

UNC-15 probe

University of Michigan probe

(WHO) probe

Furcation probes

Furcation probes is also known of ***Nabers Probe***

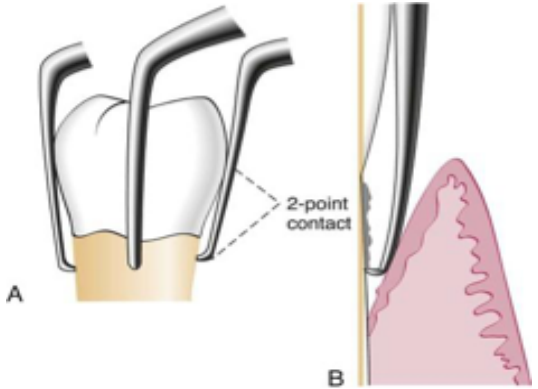
- Measure the horizontal and vertical pocket depths of multirooted teeth

Periodontal *Scalers:*

- 1 - **Chisel Scalers**

  Used to remove supragingival calculus from the **anterior teeth**

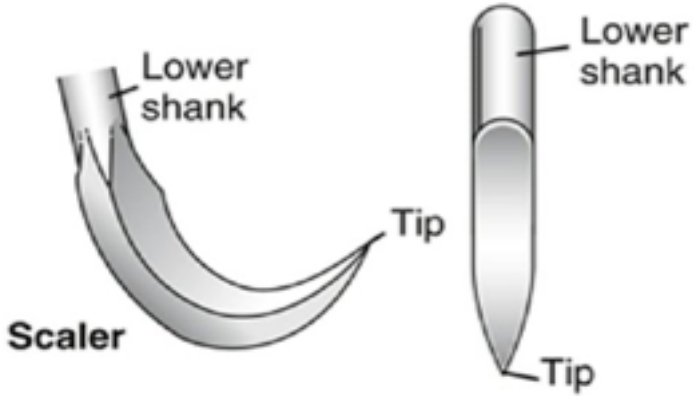
- 2- **Hoe Scalers:**
  - Remove heavy supragingival calculus
  - Effective when used on buccal and lingual surfaces of **posterior teeth**



Periodontal *Scalers:*

- 3 -Sickle scalers:

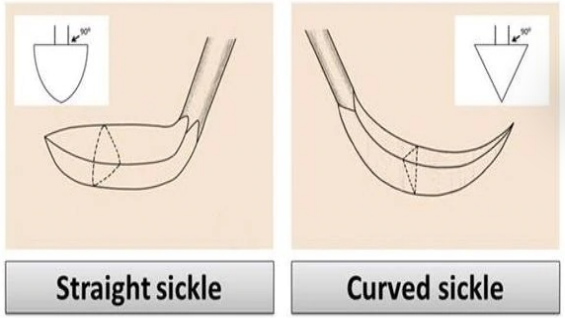
- Remove large deposits of supragingival calculus.
- Two cutting edges that converge in a highly pointed tip and have a flat surface.



Types of Sickle Scalers:

Sickle scaler straight blade:

a long, straight shank is used to remove calculus from the **anterior areas.**



Sickle Scaler Curved Blade:

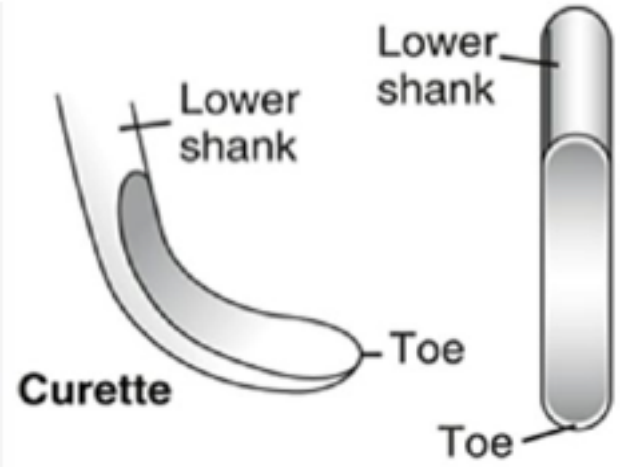
A contra-angle shank, is designed to remove calculus from the **posterior teeth.**

Periodontal Curettes:

- Have a rounded end, with one or two cutting edges

USED FOR :

- Removing deep subgingival calculus.
- Removing soft tissue lining of a periodontal pocket.
- Root planning.



Types of periodontal curettes:

A- Universal Curettes:

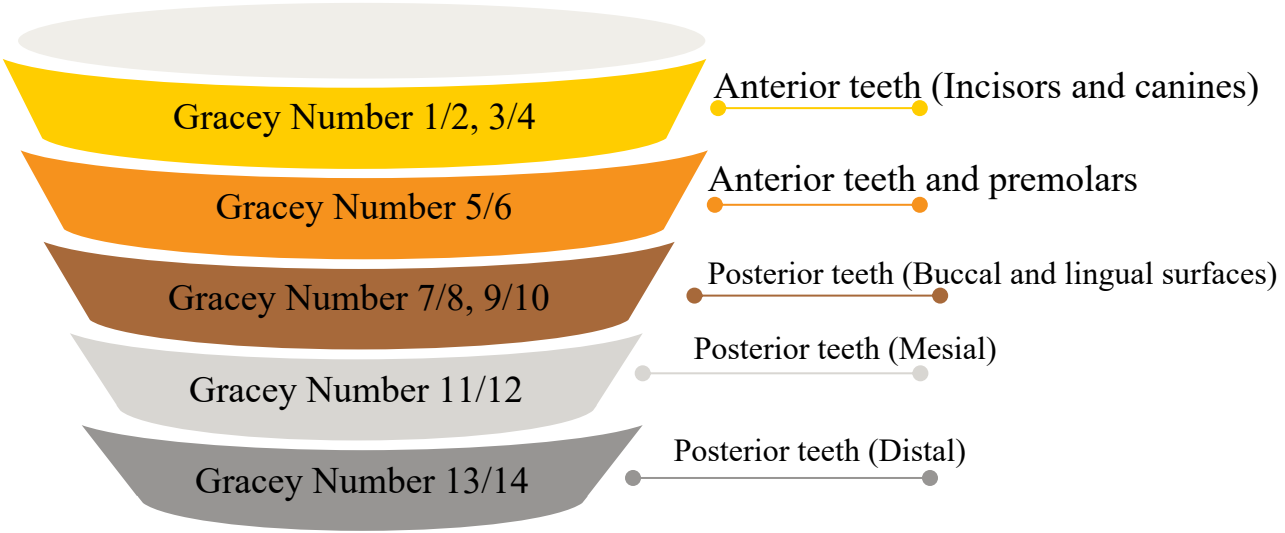
1. Designed to adjust to all tooth surfaces.
2. Have two cutting edges, one on each side of the blade.
3. Double-ended.

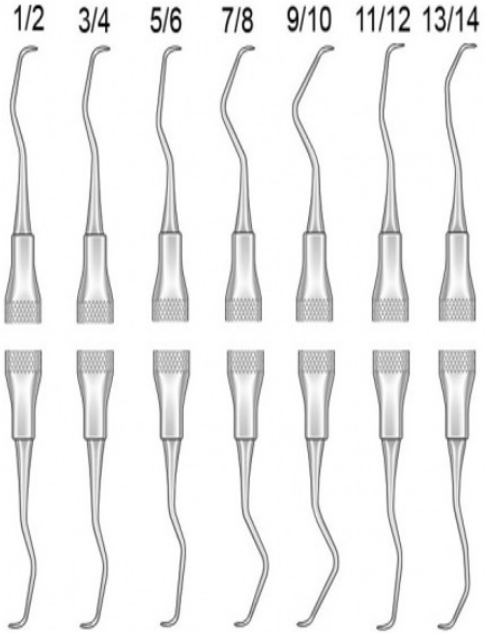
Types of periodontal curettes:

A- Gracey Curettes:

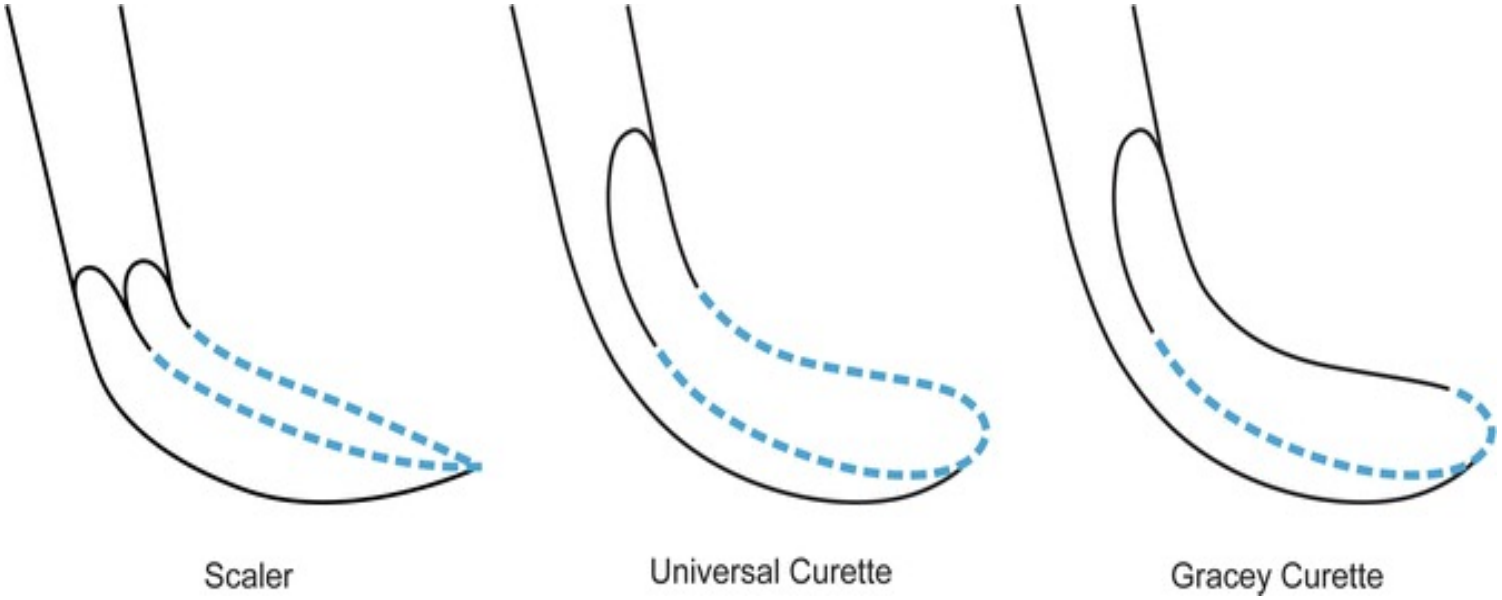
1. Designed to adopt to specific tooth surfaces (mesial or distal)
2. Only have one cutting edge and rounded working end
3. Allow for deep scaling and root planning.

Types and using for Gracey Curettes





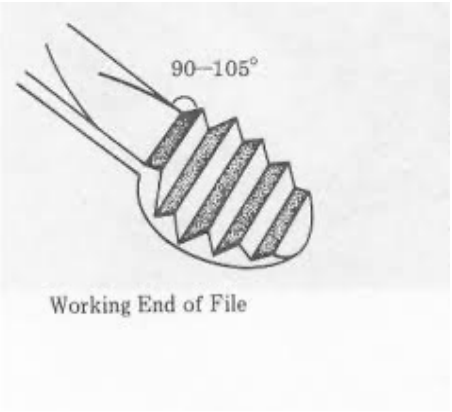
Difference of Cutting Edge of Scaler and Curettes



Periodontal Files:

- Used to crush or fracture **extremely heavy calculus**

- Each working-end of a periodontal file has several cutting edges.

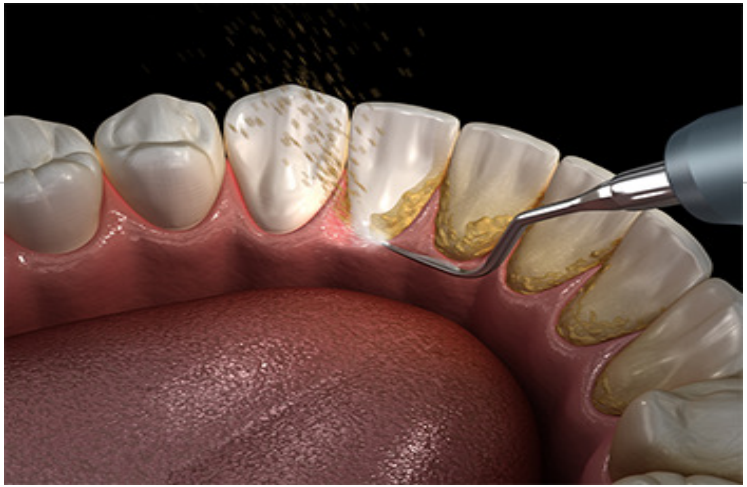


Periodontal Ultrasonic:

- Removes calculus quickly
- High-frequency sound waves into mechanical energy in the form of extremely fast vibrations at the instrument's tip.
- Water at the tip avoids the buildup of heat.
- Water from the tip washes debris and bacteria from the pocket's base.

Ultrasonic Used for:

- Removing supragingival calculus
- Removing difficult stains.
- Removing subgingival calculus.
- Removing plaque, and endotoxins from the root surface
- Cleaning of furcation areas.

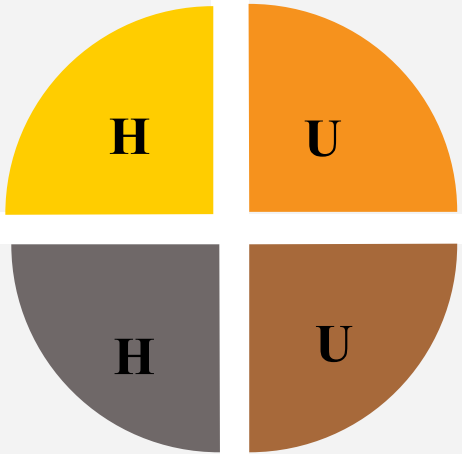


Hand and Ultrasonic Scaling:

Hand Scaling

Advantages:

- Great tactile sensitivity.
- More control
- Area-specific designs to improve access.



Ultrasonic Scaling

Advantages

- Improved healing time.
- The water supply keeps the operating field clean.
- With correct application, repetitive motions are reduced.
- Tissue distention is reduced.

Gracey Instrumentation Basics

Critical Thinking :

Case Study:

A periodontitis risk comes in with an adult patient. The patient has moderate calculus on the mesial lingual of tooth #19 and heavy calculus on the lingual of teeth #24 and #25.

Questions :

1. What is the appropriate periodontal instrument that can be used to measure the periodontitis' stage of risk?
2. what is the appropriate Gracey curettes that can be used to remove the calculus from tooth #19?
3. what are the appropriate Gracey curettes that can be used to remove the calculus from teeth #24 and #25?