

SHARPENING ESSENTIALS



NORTH BAY/BIOSCIENCE, LLC

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S H A R P E N I N G E S S E N T I A L S

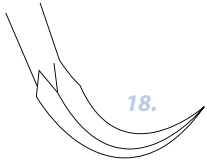
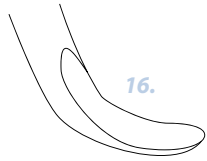
In cooperation with Kathi T Shepherd, RDH, MS, University of Detroit Mercy, School of Dentistry, Department of Hygiene

Sharpening Essentials

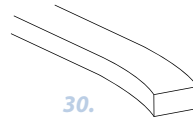
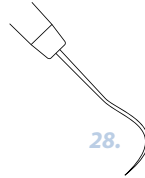
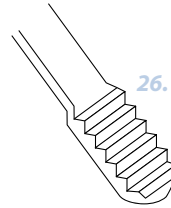
A proven Technique that will:

- Save Time
- Save Effort
- Save Money





- 2. Armamentarium
- 4. Instrument Components
- 5. Basic instrument design
- 6. Determining instrument sharpness
- 8. Designing the work area
- 9. The sharpening process
- 16. The universal curet
- 18. The sickle scaler
- 20. The area-specific curet



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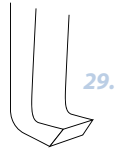


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Hand-held Stone Method

The most commonly used sharpening technique is the stationary instrument/moving stone method.

In this method, the instrument is stabilized and the stone is held at a consistent angle to the face of the blade during the sharpening process.

Ideal for chairside application during patient treatment, this hand-held stone method is practical and can be done anywhere in the dental office where there is adequate light and a good working surface.

When To Sharpen

Instruments should be sharpened after 10-15 working strokes.

Clinical Advantages

A frequently sharpened instrument requires:

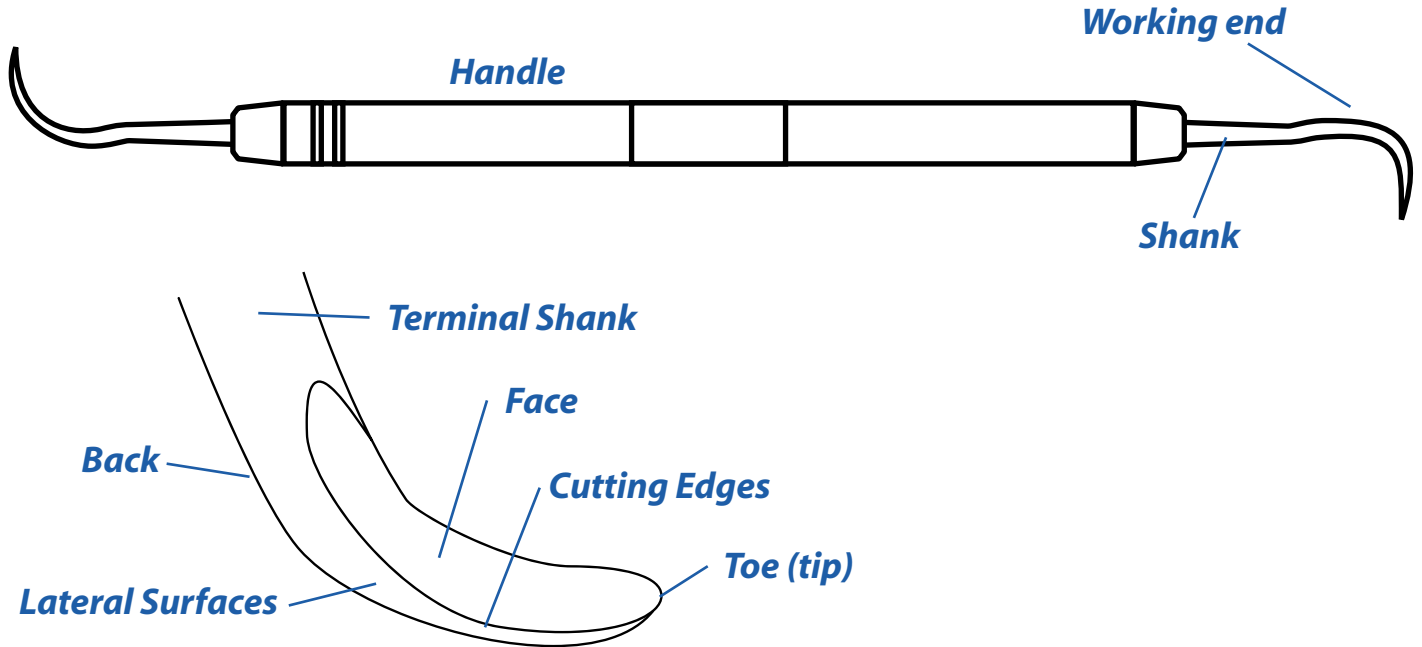
- Less recontouring than one which has become extremely dull.
- Less time for the sharpening procedure because less metal needs to be removed to create a sharpened cutting edge.
- Fewer and lighter strokes to remove calculus deposits.

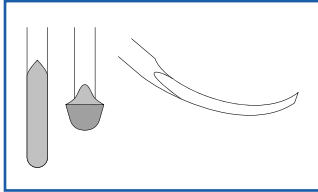
This efficient and effective sharpening procedure will require the use of the following:

- Good lighting source
- Stable work surface
- Sharpening stone
- Magnifying glass
- The Edgemate™ Disposable Chairside Sharpening Guide
- gauze
- sterile instruments
- personal protective equipment: glasses, gloves, mask



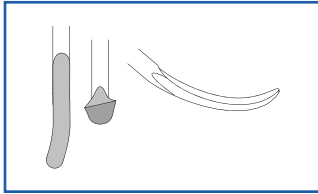
Instrument Components





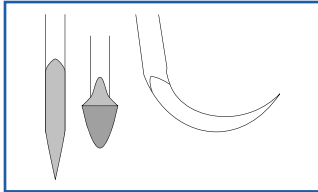
Universal Curet

- Parallel cutting edges
- Blade honed 90° to the terminal shank
- Rounded back



Area Specific Curet

- Curved cutting edges
- Blade off-set to the terminal shank
- Rounded toe and back



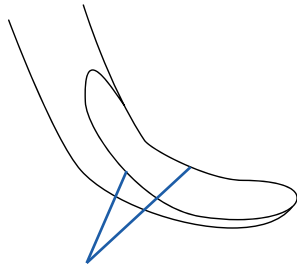
Sickle Scalers

- Lateral cutting edges converge to form a pointed tip
- Blade honed 90° to the terminal shank
- Convex cutting edges

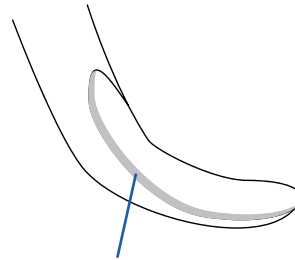
Using the Glare Test

Assessing sharpness will prevent over and under sharpening and prolong the working life of the instrument.

Using a good light source, observe the sharpened cutting edge. The use of a magnifying glass may be helpful.



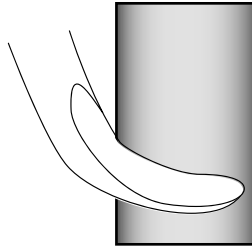
Sharp – a fine line will not reflect light



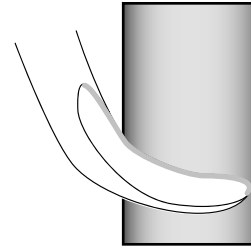
Dull – a thick line will reflect light

Using a test stick

Adapt the instrument to the test stick in the same manner in which it would be applied to a tooth surface.



Sharp - A correctly sharpened instrument will grab the test stick



Dull - A dull instrument will slide over the test stick.

D e t e r m i n i n g I n s t r u m e n t S h a r p n e s s

3 Considerations of the ideal sharpening area

- Well lighted
- Stable working surface
- At or near the chairside



Sharpening Essentials – the 5 Basic Steps

Step 1 Making a Guide

Step 2 Positioning the Instrument

Step 3 Stabilizing the Instrument

Step 4 Holding the Stone

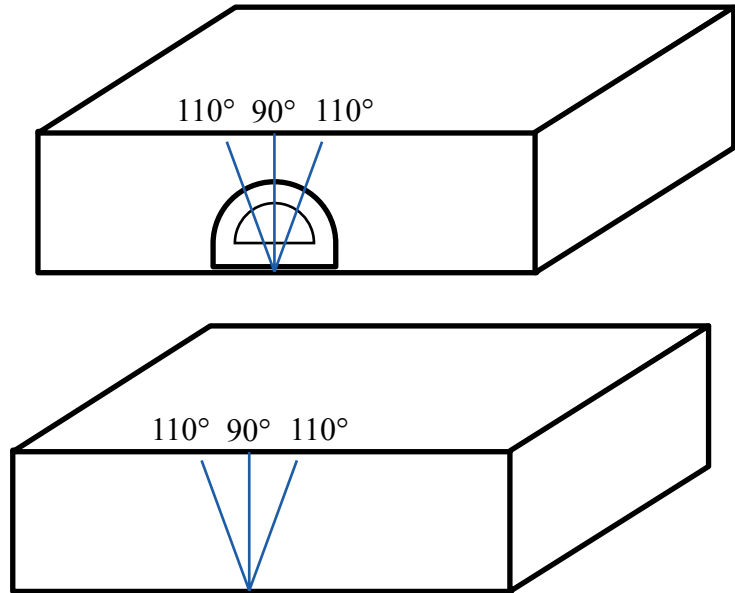
Step 5 Moving the Stone

The Sharpening Process

Step 1

Make a guide

With the protractor, mark the edge of the work surface with 90° and 110° markings.



Or...

Use the Edgemate™ Guide

Place this guide with the fold line at the edge of the counter.

Place the 90° mark perpendicular to the floor.

The Sharpening Process

Step 2

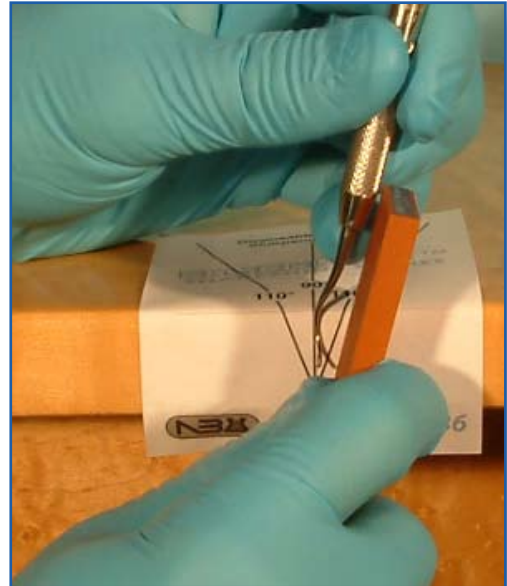
Positioning the Instrument

Place the instrument in your non-dominant hand.

Place the terminal shank at the 90° mark on the guide.

Face the toe of the instrument toward you.

The face of the blade will be parallel with the floor.



Step 3

Stabilize the Instrument

Brace your non-dominant elbow and forearm on the stable work surface.

Keep the terminal shank positioned at 90°, perpendicular to the floor.

Hold the instrument in a very secure modified pen grasp.

Step 4

Holding the Stone

Hold the sharpening stone in your dominant hand.

Place your thumb against the side of the stone nearest you.

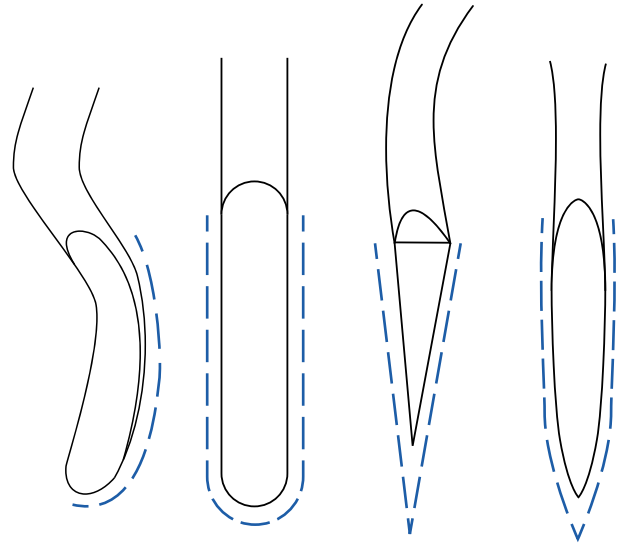
Place your fingers on the side of the stone closest to the working surface.

Confine your grasp to the lower one-half of the stone.

Step 5

Moving the Stone

Instrument design determines the correct application of the sharpening stone to the instrument.

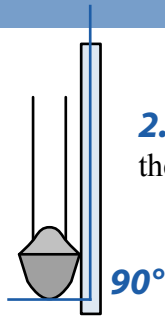


The Sharpening Process

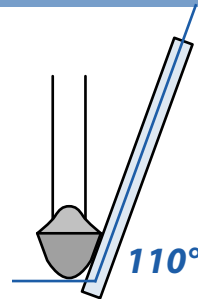
The Universal Curet



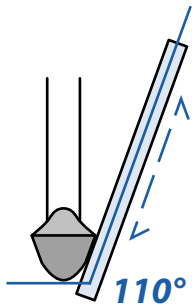
1. Place the stone against the heel one-third of the cutting edge.



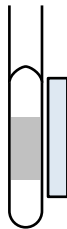
2. Position the stone at the 90° mark



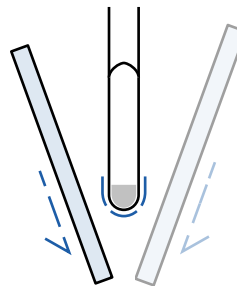
3. Tilt the upper part of the stone to the 110° mark.



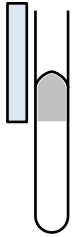
4. Move the stone in short rhythmic strokes against the cutting edge, maintaining the stone at a consistent 110° angle.



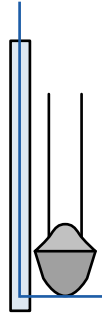
5. Proceed to the middle one-third of the blade and repeat the sharpening process.



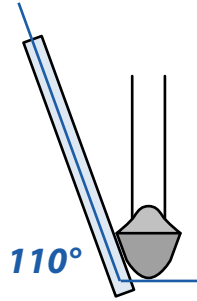
6. Round the toe with continual downward strokes, rotating around the toe of the curet.



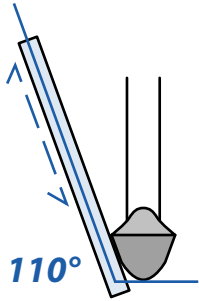
1. To sharpen the opposite edge, place the stone against the heel one-third of the opposite cutting edge.



2. Position the stone at the 90° mark



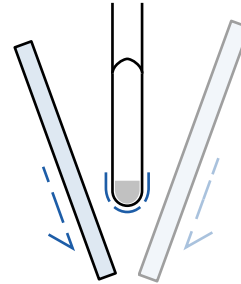
3. Tilt the upper part of the stone to the 110° mark.



4. Move the stone in short rhythmic strokes against the cutting edge, maintaining the stone at a consistent 110° angle.



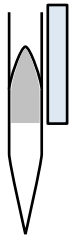
5. Proceed to the middle one-third of the blade and repeat the sharpening process.



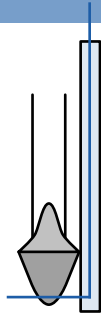
6. Round the toe with continual downward strokes, rotating around the toe of the curet.

The Universal Curet

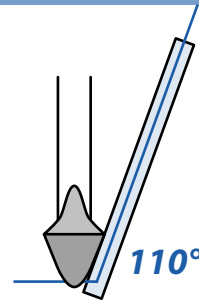
The Sickle Scaler



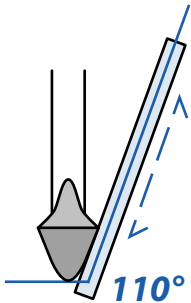
1. Place the stone against the heel one-third of the cutting edge.



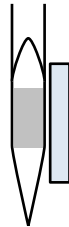
2. Position the stone at the 90° mark



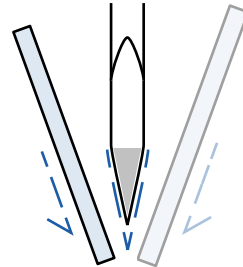
3. Tilt the upper part of the stone to the 110° mark.



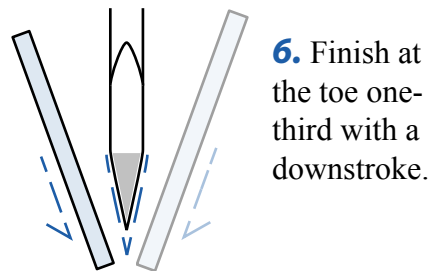
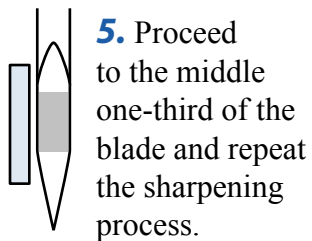
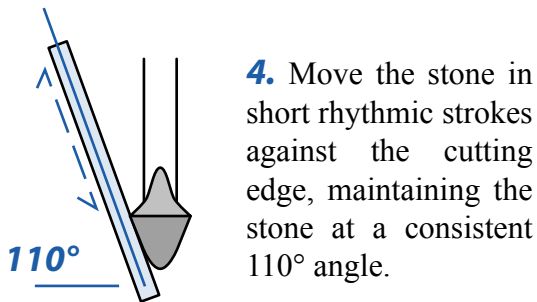
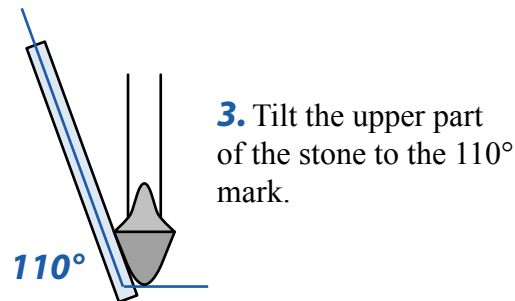
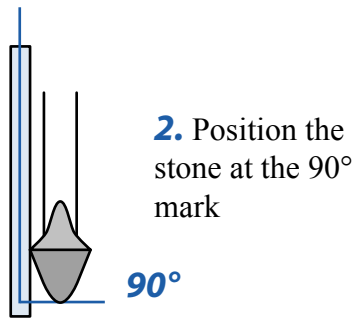
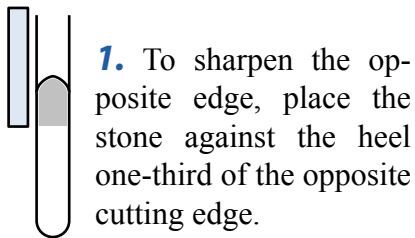
4. Move the stone in short rhythmic strokes against the cutting edge, maintaining the stone at a consistent 110° angle.



5. Proceed to the middle one-third of the blade and repeat the sharpening process.

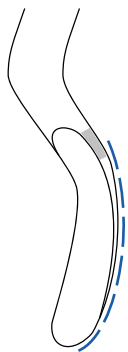


6. Finish at the toe one-third with a downstroke.

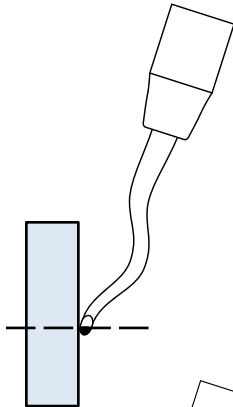


The Sickle Scaler

The Area-Specific Curet



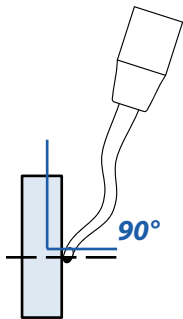
1. Sharpen only the larger, outer cutting edge.



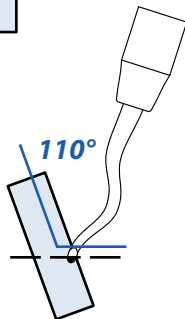
2. Place the face of the instrument (not the terminal shank) parallel to the floor.



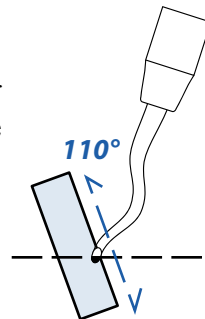
3. Place the stone against the heel of the cutting edge.



4. Position the stone at the 90° mark.

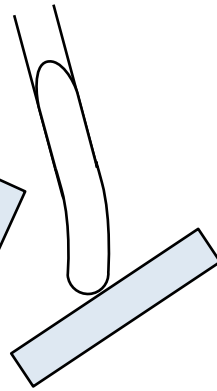
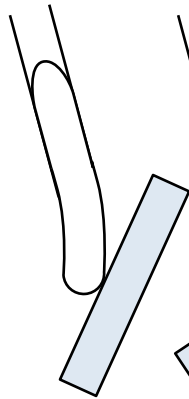
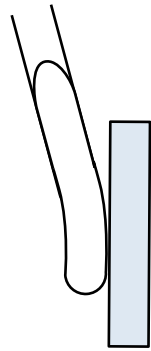
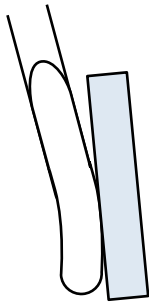
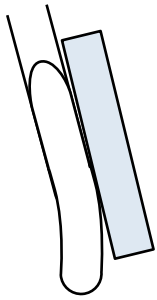


5. Tilt the upper part of the stone to the 110° mark.



6. Move the stone in short rhythmic strokes against the cutting edge, maintaining the stone at a consistent 110° angle.

Sharpen only the larger, outer cutting edge.



Carefully adapt the stone in small sections. This will preserve the curved shape.

Do not keep the stone in one section for a prolonged time or the blade will become flattened.



The Area-Specific Curet

Remember

The outline of anterior and posterior sickle scalers differs.

Sharpen to preserve the shape

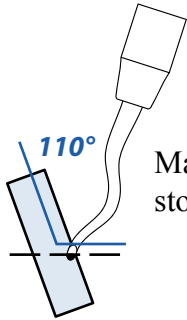
Always finish in a downward stroke. Do not lift the stone between strokes.



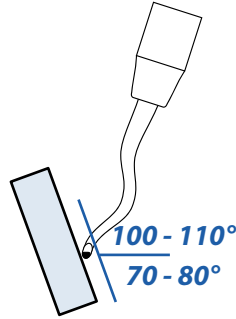
The Anterior Sickle



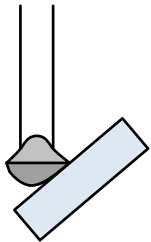
The Posterior Sickle



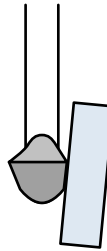
Maintain the 110° tilt of the stone at all times.



When the correct angulation is applied to the lateral side of an instrument, a 70° to 80° internal angle will be maintained.



Excessive angulation of the stone will result in a dull, weak instrument.



Inadequate angulation of the stone will result in difficult instrument adaptation to the tooth surface.

Helpful Tips

There are a variety of sharpening stones that can be used to create a sharp, well-contoured instrument. Some sharpening stones are applied to the instrument dry, without lubrication while some stones must be lubricated.

Sterile water is indicated for synthetic sharpening stones. Natural sharpening stones however, should be lubricated with sterile oil. In each instance, manufacturer's recommendations should be followed.

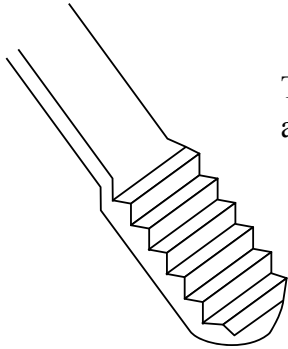
The benefits of using a dry stone include:

- the ability to be sterilized
- the ability to sharpen chairside
- sharpens (sharpening) without creating nicks in the blade due to leftover metal filings which can be suspended in the lubricant.

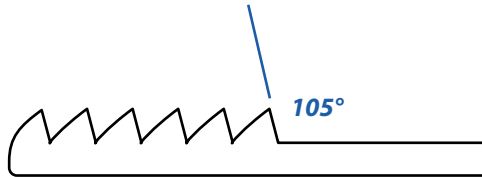
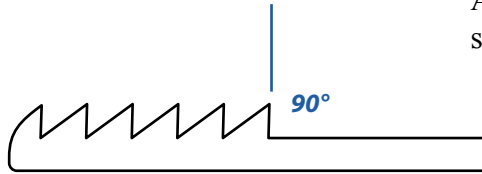


Sharpening Stones

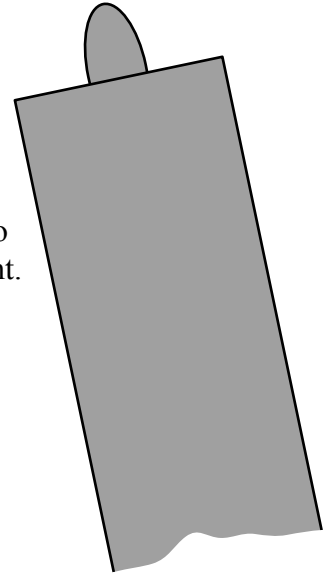
The Periodontal File

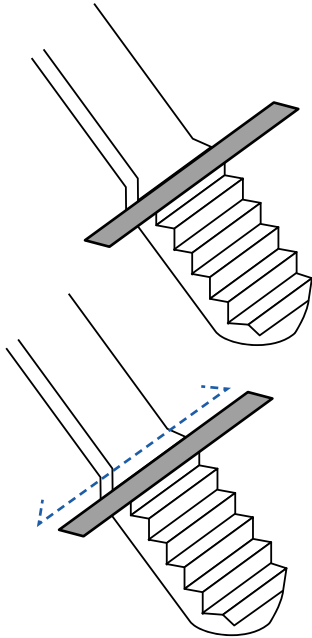


The cutting edges of the periodontal file are set at 90° and 105° to the shank.

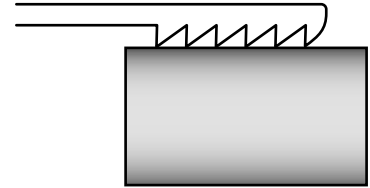


A tanged file is used to sharpen this instrument.

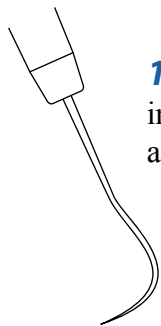




- 1.** Lay the tanged file evenly in a horizontal position against the first cutting edge.
- 2.** Move the file back and forth across the cutting edge. Repeat for each of the cutting edges.
- 3.** Test on a test stick. A sharp instrument will grab the test stick.

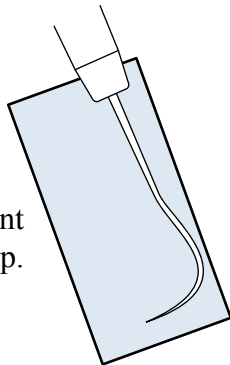


The Periodontal File



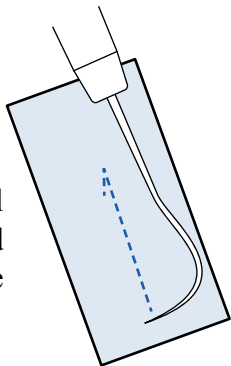
1. Observe the working end tapering into a point.

2. Hold the instrument in a modified pen grasp.

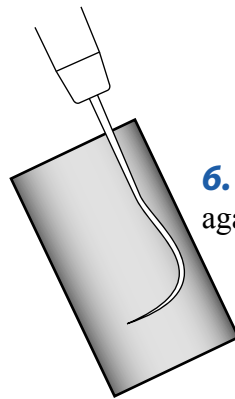


3. Place the portion of the working end closest (closest) to the shank against the stone at approximately a 15° to 20° angle.

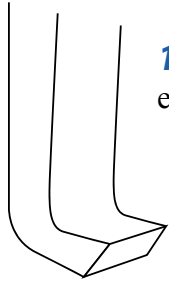
4. Apply only a small section at a time and draw the side of the tip along the stone.



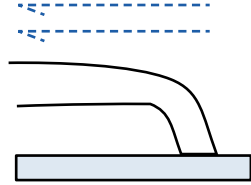
5. Use slow steady stroke to maintain control and even pressure to each section.



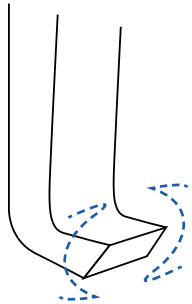
6. Test for sharpness against a test stick.



1. Observe the working end tapering into a point.

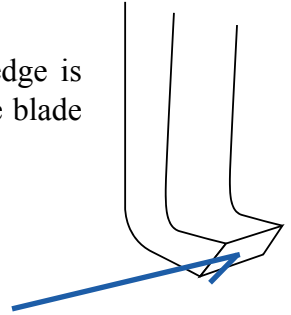


3. Using short, rhythmic strokes pull the hoe toward the cutting edge across the stone. Move the arm and hand as one unit.

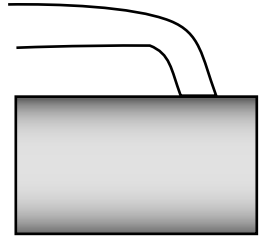


4. Round the corners by gently rolling the stone across each corner.

2. A single, straight cutting edge is formed from the junction of the blade and toe, beveled at a 45° angle

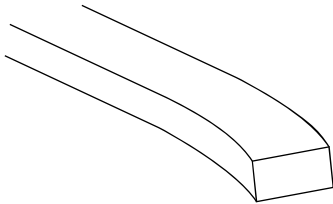


5. Test for sharpness against a test stick.

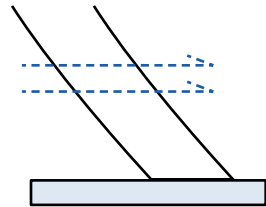


The Hoe

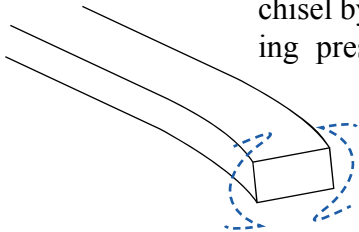
1. The blade is continuous with the shank and is beveled at a 45° angle.



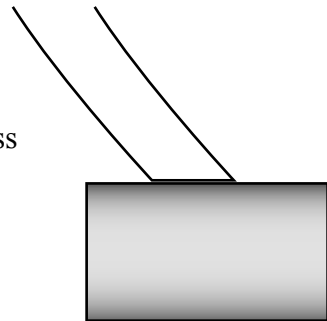
2. Similar to the process of sharpening the hoe, hold the instrument in a modified pen grasp. With moderate, even pressure, push the instrument forward toward the cutting edge. Apply the toe to the stone to maintain the original bevel of 45°.



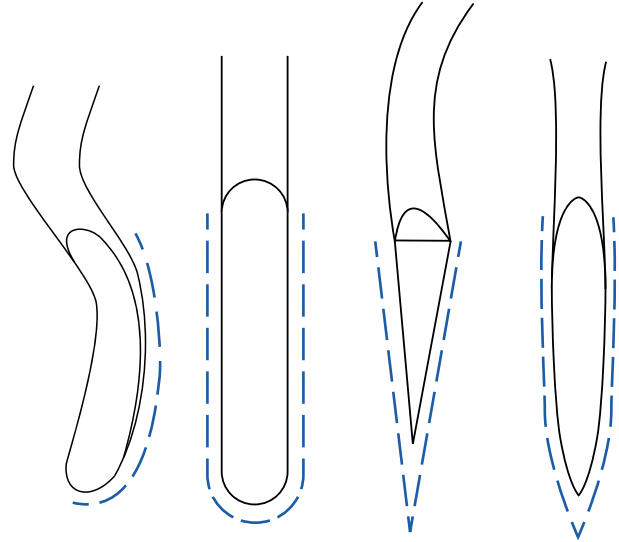
3. Round the corners of the chisel by applying gentle rolling pressure at each corner



4. Test for sharpness against a test stick.



The shapes of plastic instruments are similar to those made of traditional metal. Application of the same methods of sharpening will produce an efficiently sharpened plastic instrument. In each instance, the manufacturer's specifications must be followed. Not all plastic instruments can be sharpened.



Plastic Instruments

Wilkins EM:

Clinical Practice of the Dental Hygienist
Seventh Edition. Media, PA, Williams & Wilkins, 1994.

Pattison AM And Pattison GL:

Periodontal Instrumentation
Second Edition. East Norwalk, CT, Appleton & Lange, 1992.

Schoen DH and Dean M:

Contemporary Periodontal Instrumentation
Philadelphia, W.B. Saunders Co. 1996.

Nield-Gehrig IS and Houseman GA:

Fundamentals of Periodontal Instrumentation
Third Edition, Media PA, Williams & Wilkins, 1996.

Woodall I:

Comprehensive Dental Hygiene Care
Fourth Edition. St. Louis, Mosby-Year Book, Inc., 1993.

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sales@nbbs.com

PO Box 4319

13606 S. West Bay Shore Dr.

Traverse City, MI 49685-4319



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