

INSTRUMENT SHARPENING INSTRUCTIONS

WHY SHARPEN INSTRUMENTS?

Instruments should be kept as true as possible to their original design. Sharp instruments can reduce hand and wrist fatigue, improve calculus removal, save time, improve tactile sensitivity, and minimize patient discomfort.

WHEN TO SHARPEN INSTRUMENTS?

Instruments should be sharpened before each use; however, please consider the following when deciding to sharpen instruments:

- Dull instruments require excessive pressure to remove calculus
- Dull instruments require multiple strokes to remove calculus
- Dull instruments do not “grab” or “bite”
- The number of uses between sharpening
- Evaluation of the cutting edge against a Delron™ stick
- Patient comfort and evaluation

Instruments can be sharpened by using several different types of stones and different shapes of stones

- Arkansas stones – Natural stone (used for routine sharpening and finishing)
 - a. Flat stone – used in routine sharpening and finishing of the edge and toe of an instrument
 - b. Conical stone – used in routine sharpening and finishing of the toe and face of an instrument
- India stone – Synthetic stone (used for re-contouring a dull instrument)
 - a. Flat stone – used in re-contouring dull edges and toes of an instrument
 - b. Cylindrical – used in re-contouring dull toes and faces of an instrument
 - c. Wedge – used in re-contouring dull edges, toes and faces of an instrument
- Ceramic stones – Synthetic stone (used for routine sharpening and finishing of an instrument)
 - a. Flat stone – used in routine sharpening and finishing of the edge and toe of an instrument
 - b. Cylindrical stone – used in routine sharpening and finishing of the toe and face of an instrument

HOW TO SHARPEN INSTRUMENTS?

Stone moves while instrument is held stationary

1. Place 1 drop of Miltex Honing Oil on the Arkansas or India stone. No lubrication required on ceramic stones. (Only apply oil if oil was not previously applied to stone or if more lubrication is needed)
2. Hold the instrument in one hand, while applying the stone to the lateral surface of the point to form a 110° angle with the face of the blade
3. Position the stone to contact the heel of the blade and work toward the tip, keeping the stone in contact with the blade throughout the sharpening procedure
4. Move the stone up and down with short strokes, placing more pressure on the down stroke (Do not move the instrument, keep the instrument still)
5. Finish sharpening the instrument with a down stroke, this will prevent a rough edge from forming
 - a) Metal particles and lubricant will accumulate on the blade; this can be wiped off with sterile gauze. (This is also an indication that the right angulation was maintained during the sharpening process)
6. For sickle scalers, continue sharpening to the point. For curettes, continue around the toe to maintain its curved shape
7. Test for sharpness with a plastic Miltex Delron stick. If the blade is sharp, it will grab into the stick. If the blade is dull, it will slide over the stick without grabbing. If the blade is still dull, re-evaluate the angle of the stone and repeat the sharpening procedure (steps 2-6)
8. Repeat the procedure to sharpen the other side of sickle scalers and universal curettes

Rounding the toe of curettes

1. Place 1 drop of Miltex Honing Oil on the Arkansas or India stone. No lubrication required on ceramic stones. (Only apply oil if oil was not previously applied to stone or if more lubrication is needed)
2. Place stone at a 45° angle to the face of the instrument
3. Using downward strokes, rotate the stone around the toe of the instrument

Sharpening the face of dental instruments

Sharpening the face of periodontal instruments is only recommended for removing a roughened edge because extraneous grinding of the face can weaken the instrument blade.

- For curettes and curved sickles, use a conical or cylindrical stone (Arkansas Conical, part number: STN-ARK-CON or India No. 309 part number: STN-IND-CON-309)
 1. Place 1 drop of Miltex Honing Oil on the Arkansas or India stone. No lubrication required on ceramic stones. (Only apply oil if oil was not previously applied to stone or if more lubrication is needed)
 2. Place the stone at the junction between the face and shank of the instrument
 3. Roll the stone across the face of the instrument, moving toward the toe of the instrument
 4. Use as few strokes as possible and light, even pressure
- For straight sickle instruments, use a flat stone (Arkansas No. 4 flat, part number: STN-ARK-FLT-4 or India No.1, part number STN-IND-FLT-1)
 1. Place 1 drop of Miltex Honing Oil on the Arkansas or India stone. No lubrication required on ceramic stones. (Only apply oil if oil was not previously applied to stone or if more lubrication is needed)
 2. Place the stone on the entire facial surface of the instrument
 3. Move the stone across the facial surface in a back/forth motion
 4. Use as few strokes as possible and light, even pressure