Did you know that...

It pays to keep your instruments sharp!

Sharpening instruments requires user skill, patience, and familiarity with instrument design.
Scaling instruments are manufactured using an extremely hard, stainless martensite steel. Instruments are dulled because the dental surface being worked on is harder than the metal, thus removing metal particles from the instrument blades. To restore the edge's effectiveness without altering its original form requires the proper tools.

Advantages that come with a sharp instrument:

- **the time required for a procedure is reduced**
- **it is easier to control**
- **it allows for greater precision**
- **it does not just file down calculus, it removes it**
- **it will not injure gingival tissue**
- **it improves tactile sensitivity, allows for a light grip**

Instrument sharpness should be checked after each use. With proper light and a magnifying glass, any dulling of the edge can be detected. If the edge is dull, it will appear rounded and reflect light due to its smooth, filed-down surface. An easy way to test the sharpness of the instrument is to utilise a test stick - if the edge is dull, it will glide along the surface of the stick and if it is sharp, it will "bite" into it.

It is recommended that the instrument be sharpened at the first indication of dulling. If the instrument is allowed to become grossly dulled, it will be necessary to remove a greater amount of metal when sharpening. The task is time-consuming and the original form of the edge is much more difficult to maintain.

Naturally, the size of the edge will decrease with sharpening which, over time, will also decrease the effectiveness of the instrument. The manufacturers recommend discontinuing use of instruments whose edge has decreased to about half of the original size.

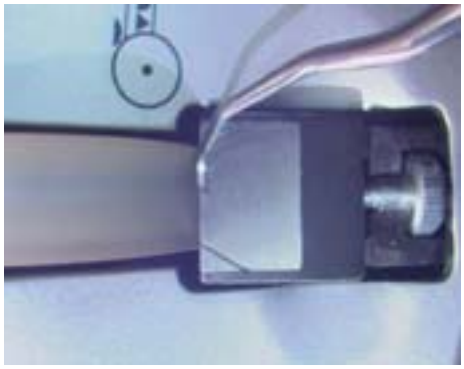
Sharpening requires:

- a manual sharpening stone or powerdriven sharpener
- a stable and level work surface
- proper lighting
- a magnifying glass
- a test stick

Stones for manual sharpening can be flat or cone-shaped and the sharpening methods vary. The stone can either be made of a natural material (such as an Arkansas stone) or a synthetic material (such as a ceramic stone). Ceramic stones are usually harder and therefore are better suited to the sharpening of extremely dull instruments.

Sharpening of instruments with a sharpening machine

The **LM-RondoPlus** sharpening machine allows for an effective, safe, and accurate sharpening of scaling instruments as well as other hand instruments that need sharpening.



The LM-RondoPlus has a fine ceramic sharpening stone, mounted in the center of the machine's rotatable casing. The device is equipped with a two-position instrument rest on which the blade is placed during sharpening: the lower rest position is used for sharpening scaling instruments and the upper rest position for preparation instruments. There is also a handrest which provides a stable base for the operator's hand. After the machine is turned on, rotation of the stone can be controlled with the footpedal. The instrument sits firmly in the operator's hand while the hand is supported by the handrest. The blade is placed on the instrument rest against the stone so that the work surface is horizontal. Both the cutting edge and instrument's contact point with the stone must be seen. The machine is started. The casing is rotated slowly and smoothly until the rotating stone has sharpened the edge. The idea is that sharpening is performed in a single, uninterrupted movement. Finally, the sharpness of the instrument is tested on the acrylic sticks located on either side of the machine.

When the sharpening stone is worn, it can be easily replaced. An illustrated manual is included with the LM-RondoPlus. A video cassette is also available for use in LM-RondoPlus operating instruction.

Instrument care

The delicate instrument blades can easily be damaged or dulled if they come into contact with hard surfaces. Therefore it is vital that the instruments are not damaged by scraping against each other or being pressed against metal surfaces during sterilisation and when stored.

Advantages of machine sharpening

- fast, accurate
- edge form maintained
- saves the instrument
- simple for everyone to learn
- always ready for use

Disadvantages of machine sharpening

- instrument must be sterile
-not possible during procedures
-relatively expensive investment

Recommendation:

Sharpen your instruments often and only a little at a time!
Dental Hygienists, Turku Finland