

The Secret of Rotary Glide Path with Pre Shapers™

A glide path is defined as the unimpeded path from the canal orifice to the canal terminus which rotary shaping instruments will follow. Creating an .02 tapered glide path is critical for the safe and effective use of nickel-titanium rotary shaping instruments. Glide path can be further described as a manual glide path created with hand files, or a mechanical glide path created with rotary files such as Pre Shaper nickel-titanium instruments from SPECIALIZED ENDO.

Problems with a Hand Filed Glide Path

Traditionally, the glide path has been created with size 10, 15, and 20 stainless steel hand files. Often, creating the glide path with stainless steel hand files is the most demanding part of the entire endodontic procedure. Getting a size 20 hand file to the canal terminus can be fatiguing and time consuming. Additionally, this is where steel hand files tend to create ledges, blockages, and transport canals. This is the critical point where many cases are won or lost.

Because most canals naturally have an unimpeded path to the canal terminus, stainless steel hand files are responsible for creating most of the blockages that are encountered during canal negotiation and glide path formation. The two main causes of canal blockage are tissue compaction (pushing pulp tissue ahead of the file) and ledge formation. Stainless steel hand files are much more likely than nickel-titanium rotary files to produce these unwanted consequences.

Benefits of Rotary Glide Path.

The benefits of using a rotary instrument to create a glide path are numerous. First, the flexibility of nickel-titanium is well tested and well proven to prevent ledge formation and transportation when compared to stainless steel. This reason in itself addresses a common cause of lost patency during negotiation. Second, the rotary action of the file severs and moves vital pulp tissue out of the canal in the coronal direction. The rotary action prevents compaction of pulp tissue in the apical direction. This benefit is completely opposite to what is seen with stainless steel hand files. Stainless steel hand files push pulp tissue in the apical direction, which has a tendency for blocking the canal and inhibiting patency. After a short time of using rotary glide path instruments you will notice the flutes are full of tissue. This result is not seen with hand files.

Pre Shaper™ instruments from SPECIALIZED ENDO are small sized rotary nickel-titanium instruments designed specifically for creating a pilot glide path. These new instruments are extremely flexible because of their small tip sizes (12, 14, and 18) and 2% taper. To increase instrument torque strength the cross-sections are square rather than triangular, thereby increasing the central core of the instrument. These glide path instruments are resistant to breakage because their fatigue limits are extremely high. Another reason they rarely separate is due to the fact that their small sizes prevent them from engaging much of the canal wall. The primary function of these instruments is not to shape the canal, but to remove tissue from the canal and create a glide path.

There will always be a need for small stainless steel hand files, however their uses will be limited. Stainless steel hand files will primarily be used for length determination with an apex locator, negotiating extreme curvatures that require a sharply curved instrument to slip past the impediment, and for patency maintenance. The use of rotary instrumentation to create a predictable glide path has changed the way many clinicians negotiate canals. It is one of the few changes in clinical technique that is both faster and safer. Rotary glide path is the future.

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