

# Maintenance of Aesthetic Restorations Part 1: Polishing

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With the increased demand for tooth colored dentistry, there is also an increase in the responsibility for main-

tenance and special care. It is extremely important for the dentist and hygienist to contribute to the longevity and integrity of esthetic restorations by maintaining smooth surfaces through the appropriate polishing agents. Smooth surfaces decrease the potential for stains and plaque retention, and minimize surface deterioration.

### Exceptional Smile Care

Dental practices that include post-operative smile care are committed to the long-term success of the patient's investment. Inappropriate polishing agents can compromise many characteristics of esthetic restorations. They can abrade, scratch, dull the glaze, or alter the

shade, color and texture, as well as compromise the marginal integrity of the restorations. For the consumer, this can diminish the longevity and appearance of the newly rejuvenated smile.

The goal of polishing involves creating the smoothest surface possible while retaining a glossy or lustrous shine, whether on the restoration or the natural tooth surface. Selective polishing involves polishing only selected tooth surfaces or not polishing at all. The dentist and hygienist should also inform the patient of habits (e.g., tea, coffee and alcohol consumption, tobacco usage, etc.) that can contribute to the deterioration of the restored smile.

### Abrasives

Polishing pastes may contain abrasives that differ in particle size and particle hardness. The finer the abrasive, the smaller the scratches that are created on the tooth surface. If the surface being polished exceeds the hardness of the abrasive, the abrasive wears down and the surface does not polish as desired.

### Polishing Agents

In the last few years, several companies have recognized the need for esthetic polishing agents (See Exhibit 1).

Proxyt is a one-of-a-kind polishing agent as it uses silicon dioxide. It is available in coarse, medium and fine. Coarse is used for stain removal and smoothing down rough surfaces while medium and fine are for plaque removal and general polishing. It can be used on both porcelain and composite materials. Clinpro Prophy Paste by 3M utilizes a unique abrasive particle called perlite. It starts out coarse, but quickly breaks down to a fine paste for quick stain removal that offers high luster polishing with minimal abrasion. Clinpro is indicated for stain removal on esthetic restorations that possess extrinsic stain, and for smoothing roughened tooth and restorative surfaces. Nupro Shimmer is an aluminum oxide based polishing agent that improves shine and luster on esthetic restorations, but is not indicated for stain removal.

## EXHIBIT 1 Comparison of Polishing Agents

Polishing Agent	Examples	Indication	Manufacturer
Silicon Dioxide	Proxyt Coarse	Removal of stains on porcelain & composite materials	Ivoclar
Silicon Dioxide	Proxyt Medium Proxyt Fine	Plaque removal, polishing on porcelain & composite materials	Ivoclar
Perlite	Clinpro	Removal of stain, plaque removal on porcelain & composite	3M Espe
Aluminum Oxide	Nupro Shimmer Enamelize	Improve luster, shine, polish on composites	Dentsply Cosmedent
Diamond Paste	Diamond Polish Lumescence	Improves shine, luster, high gloss on porcelain	Ultradent Premier

### Polishing Technique

Slight modifications of current polishing techniques are required when polishing aesthetic restorations with the properly indicated prophylactic paste. Handpieces should be operated below 3000 rpm. Adaptation of a soft cup is preferred due to the fact that the lip of the cup can be flared slightly into the sulcus area. The cup should be adequately filled with the paste and held at a 90° angle against the tooth. Utilizing intermittent pressure strokes on the tooth and keeping sufficient paste in the cup will help avoid any frictional heat. A limited number of

teeth (2-3) should be treated at a time. Following the complete manufacturer's recommendations regarding the specific polishing agent will insure proper results and success of the product.

If a high gloss or luster is required on the esthetic restoration, it may not be attainable with esthetic polishing agents. Diamond polishing paste used in a dry environment with a felt wheel can be used on porcelain to help regain lost luster. If the material is composite based, aluminum oxide paste may be used in a wet environment with a prophylactic cup.

### Conclusion

With the increased awareness and demand for esthetic dentistry today, it is advantageous to stay current with dental materials and maintenance care options. For the patient, it is an added value benefit to be offered special smile care as it shows your commitment to their oral health. Dentistry today can create beautiful smiles, but it is vital to use superior polishing materials to maintain it.



*Select appropriate polishing for product.*



*Adequately fill cup with paste.*



*Hold cup at 90° angle against tooth.*



*Treat a limited (2-3) teeth at a time.*



*Flare cup into sulcus.*



*Close-up of flare of cup.*