

OFF THE CUSP

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SOLEA LASER: REDUCE AEROSOLS, INCREASE APPOINTMENTS, IMPROVE PATIENT EXPERIENCE

By Patterson Dental

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As states lift stay-at-home orders and dental offices welcome back patients, it is essential to keep patient comfort and safety at the forefront while maximizing appointment efficiencies. The [Solea laser by Convergent Dental](#) is one way your practice can introduce an anesthesia-free appointment that reduces aerosols and allows you to get more work done with each appointment.

Reduce aerosols and splatter

The Convergent Dental R&D team recently [designed two structured and controlled studies: a macroscopic and a microscopic](#). Study results demonstrated that Solea laser reduces aerosols and splatter by up to 99.9% compared to the traditional drill. The following compares the general device settings of a high-speed drill to a Solea laser.

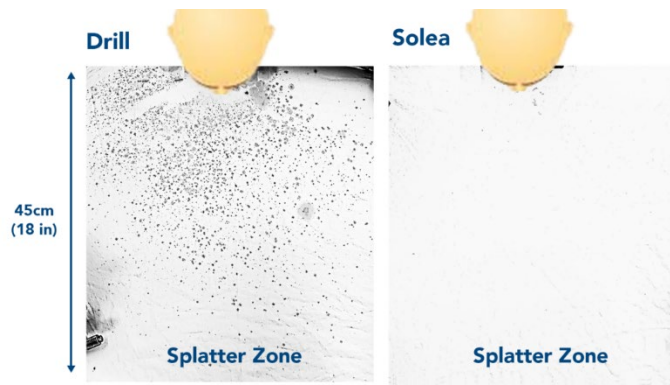
The drill

High-speed drills rotate at speeds up to 400,000 rpm, use air pressures in the range of 30-40 psi, and utilize water flows in the range of 30-60 ml/min. The high-speed drill used in studies published by Convergent Dental rotated at 350,000 rpm, used 30 psi air pressure, and used a 50 ml/min water flow rate. These settings followed manufacturer approved guidelines and were deemed acceptable by the dentist.

Solea laser

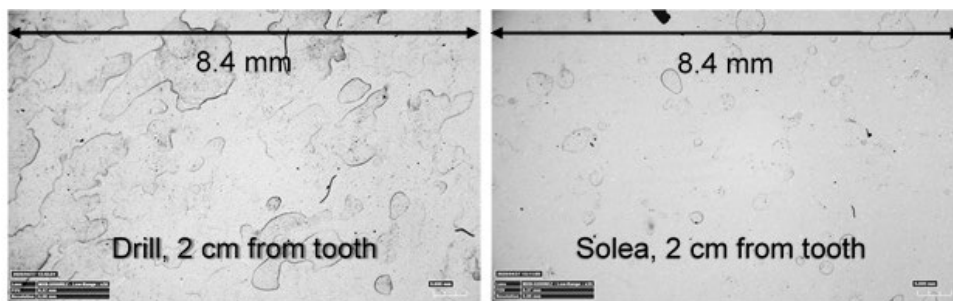
Solea has a range of settings that can be adjusted by the practitioner. In the study, the following manufacturer approved guidelines were used: 10 PSI, 8 ml/min water flow, 50% cutting speed and 1.25mm spot size. These settings were deemed acceptable by the dentist.

In the macroscopic test, the drill generated splatter as far as 45cm while Solea only produced minimal detectable splatter a few millimeters from the mouth, as seen in the below image.



Images showing the splatter (darker color) generated by High Speed Handpiece and Solea on a cover sheet located above the operator chair.

In the microscopic test, Solea produced ~98% less splatter at 2mm from the tooth, and ~99.9% less splatter at 8mm. Compared to the drill, Solea produces exponentially less splatter as you measure farther from the tooth.



Example splatter coverage on glass slides at 2cm from the tooth.

These studies show that Solea supports safer dentistry by reducing dental splatter and aerosols. Solea achieves this by utilizing ~67-83% less water flow, ~74% less air pressure, and by cutting without contact, as opposed to drills, which cut using burs that spin at up to 400,000 RPM.

Maximize the patient appointment

The importance of maximizing dental appointments as practices welcome back patients for non-emergency care cannot be understated. Your practice needs to minimize the amount of appointments each patient has to make and maximize what you get done in a single appointment. Here are several ways Solea laser meets these appointment goals:

- Maximizing hygiene appointments and leveraging single-visit dentistry. When you don't have to administer local anesthesia for direct restorative procedures, you can quickly treat patients that are in the office for a hygiene appointment.
- Shortening appointment lengths by eliminating time wasted while waiting for anesthetic or dealing with bleeding during soft tissue procedures.
- Leveraging the ability to work in all four quadrants anesthesia-free without limitations or compromising clinical outcomes.
- Performing soft-tissue procedures with ease, if you are not already. This improves patient satisfaction and profitability by eliminating the need to refer to another practice.
- Reducing personal protective equipment (PPE)-related expenses. If you can stay with your patient longer and do more dentistry in a single visit, your PPE expense may be less.

Improve the patient experience

As patients look to schedule or reschedule appointments, it is important to communicate the changes and precautions your practice has made to ensure patient safety and comfort. Keep the following in mind as more patients return to your practice:

- Patient comfort increases when you do not have to use anesthetic. With Solea laser, there is less pain and the patient won't feel numb for hours after their appointment.
- More treatment can be done in one appointment versus patients needing to come back for multiple follow-up appointments.
- Aerosol reduction will help the practice build patient confidence, which is especially important during COVID-19.
- For some patients, the sound of the drill can trigger anxiety. The laser is quieter, cuts faster and virtually pain free.

By reducing aerosols, increasing appointments and improving the patient experience, the Solea laser is only one tool available to help ensure your practice is successful as you welcome back patients. Now through Aug. 31, 2020, we're offering six months, no interest and no payments, followed by 5.95% for up to 60 months on Solea and many other equipment and technology products. [View our flier](#) (PDF) or contact your Patterson rep for details.

Keep watching the Patterson Dental social media channels for resources and educational events like our on-demand [reopening webinar series on communicating with patients](#) and [aerosol management](#). Our [Reopen. Restore. playbook](#) is a comprehensive guide with information and resources from manufacturers, industry experts and credible organizations.

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From Patterson Dental's blog, Off the Cusp. View the original blog post:

<https://www.offthecusp.com/4-ways-to-reduce-aerosols-during-dental-treatment/>