

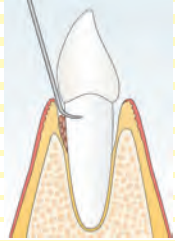


# I. Periodontology



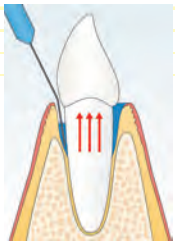
## Antimicrobial Photodynamic Therapy (aPDT)

Easy to use – with impressive results!



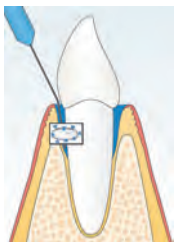
1. Perform **professional dental cleaning**

**Important:** Removing concrement from the tooth/root surface ensures better access to the biofilm! The aPDT procedure is performed immediately or no more than 1-2 days after cleaning.



2. Apply **HELBO®Blue**, beginning at the pocket fundus

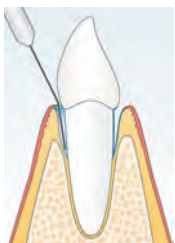
**Important:** Any air bubble at the bottom of the pocket prevents **HELBO®Blue** from reaching all bacteria!



3. Allow **HELBO®Blue** to react for **at least 1 minute** –

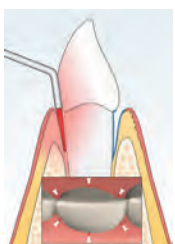
In pockets > 6 mm in size or in persistent refractory infections, allow to react for **3 minutes**

**Important:** Only bacteria that are stained blue are killed!



4. **Rinse pocket thoroughly with H<sub>2</sub>O** – remove excess dye, including at the bottom of the pocket (use suitable rinsing device)

**Important:** The **HELBO®Blue** layer must be very thin for full action of the laser light and to avoid the absorption of too much light.



5. **Circular exposure for approx. 1 minute per tooth/cm<sup>2</sup>:**

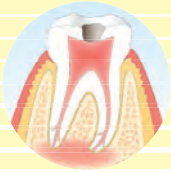
Strive for contact exposure – as close as possible to the stained bacteria – in 6 areas for 10 seconds each!

**Important:** Only sufficiently exposed bacteria are killed!

⇒ Ensure proper condition of optics and preferably recharge batteries daily!

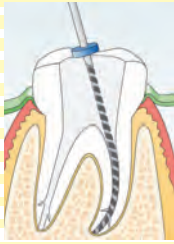
### How often should this therapy be applied?

- If used correctly (including proper prior professional dental cleaning), **one application** already achieves very good results.
- In persistent refractory infections, the application should be **repeated after approx. 1 week**; the **professional dental cleaning** should be checked and optimized, if necessary; **HELBO®Blue** should be allowed to react for **3 minutes**.



## II. Endodontics

HELBO



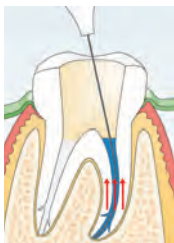
1. Conventionally **prepare tooth endodontically**

**Important:** Cofferdam recommended; preparation to **ISO 45** is best (by hand or mechanically), rinse afterwards, then dry with paper tips, which are then left in place in the canals.



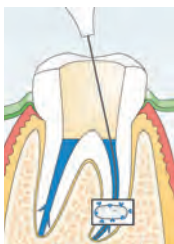
2. Apply **HELBO® Endo Seal** all over the crown area

**Important:** Diffusing dye can lead to permanent discoloration; therefore, protecting this area is essential!



3. Remove paper tips and apply **HELBO® Endo Blue** apically to coronally

**Important:** Preparation to ISO 45 is ideal - in case of smaller preparation size, mechanically move **HELBO® Endo Blue** apically (file, lentulo, gutta percha tip, ...) so that the dye reaches all bacteria!



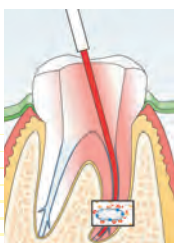
4. Allow **HELBO® Endo Blue** to react for at least 1 minute

**Important:** Only bacteria that are stained blue are killed - diffusion into tubuli ensures deep effect!



5. Remove excess **HELBO® Endo Blue** - it's best to rinse with  $H_2O$  and dry with paper tips

**Important:** Excess dye results in excessive absorption and may prevent correct light application; the root canals must be completely dry!



6. **Expose for 1 minute per canal:** Strive for contact exposure

- as close as possible to the stained bacteria, including apically

**Important:** Only adequately exposed bacteria are killed!

⇒ Ensure proper condition of the optics and preferably recharge batteries daily!



7. **Close canals** & mechanically remove (finisher!) any dye residue in the crown area

**Important:** Thanks to significant reduction in the number of bacteria, definitive obturation can be performed immediately!

