

# How to achieve the best quality in Professional Teeth Cleaning

The biofilm must be completely removed, only this can reduce the risk of caries, gingival, periodontal and peri-implant diseases.

Patients deserve the most clinically effective biofilm management. And this should be as gentle and pleasant as possible. Dental hygienist Adina Mauder, GBT (Guided Biofilm Therapy) trainer at the Swiss Dental Academy (SDA), explains how to achieve this goal successfully.

**H**ow effective is the routinely applied prevention? How good is its cleaning effect and how good are the achievable clinical results? How safe is the treatment for teeth, soft tissue and restoration materials? For Adina Mauder, these are the crucial points that determine the quality of PMPR. The protocol implemented in daily practice must also be structured systematically and must be able to be tailored to all patients. It should be gentle to the extent that patients are quite willing to attend recalls reliably. And finally, the routine must be practical and also profitable for the practice.

The dental hygienist has been working in the field of prevention for over 20 years and currently holds a responsible position at the KU64 practice clinic on Berlin's Kurfürstendamm. She has continuously expanded her knowledge as a matter of principle: "There is no standing still for me." In 2009, Mauder qualified as a dental hygienist at the Fachkolleg FA-DENT in Bavaria, with a residency at the Ludwig Maximilian University in Munich. Since

2011, she has been imparting her knowledge to dental teams both as a speaker and trainer (**Fig. 1**). This involves all detailed clinical issues and, since 2015, the successful implementation of Guided Biofilm Therapy (GBT).

## Precise answers lead to safety

"Prevention is not merely cleaning, but first and foremost it is therapy. We are therapists, specialists in preventive therapy. The deeper you go into detail in your daily work, the more questions arise." Adina Mauder sees it as her duty to answer these questions precisely in her courses. In doing so, she relies on her many years of experience, but also on scientific data. She utilizes the fact here that the methods used for Guided Biofilm Therapy have been comprehensively validated in studies. The Swiss Dental Academy, the training institute of the Swiss company Electro Medical Systems (EMS), has developed a comprehensive concept for this purpose, which is presented and explained in detail in the various courses.



**Fig. 1:** Adina Mauder regularly trains prevention teams on behalf the Swiss Dental Academy, here in the use of the piezoceramic ultrasonic PIEZON® PS instrument. (Photo: SDA)

*"Disclosure is the benchmark for better quality"*

The initial focus for each patient is on a meticulous medical history and an assessment of findings together with a risk analysis and the decision as to whether subgingival plaque removal (periodontitis treatment) is necessary (GBT Step 1, **Fig. 2**) [1]. This is always followed by disclosure, the basis of Guided Biofilm Therapy (GBT Step 2). The visible biofilm is the root cause of tooth decay (caries), periodontitis and peri-implantitis and needs to be removed as completely as possible. A practice-based study demonstrates that up to three times more biofilm remains without disclosure (20% residual deposits) than with disclosure (6% residual deposits) [2]. Disclosure also forms the basis for the patient discussion (GBT Step 3) (**Figs. 3 and 4**): "Patients understand their current situation and can improve it in a targeted manner."

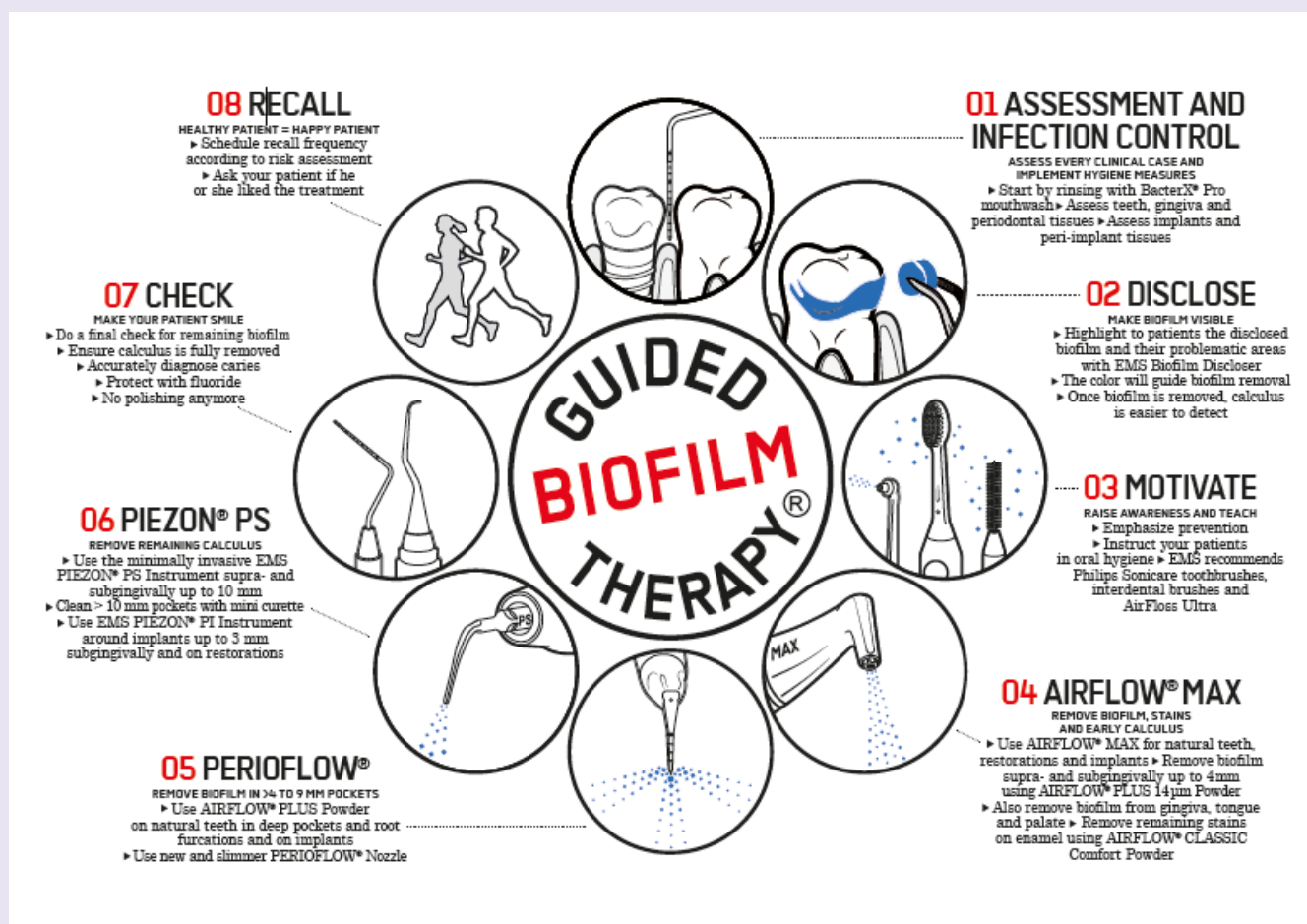


Fig. 2: Guided Biofilm Therapy (GBT) is a systematic, evidence-based protocol for oral health prevention, prophylaxis and therapy. It is designed in a modular manner and can be applied to all patients according to the indication. (Graphic: EMS)

By focusing on the biofilm first with AIR-FLOWING® during tooth cleaning (GBT Step 4), we avoid over treatment at the same time." AIR-FLOWING® with PLUS powder, erythriol-based, works supragingivally and up to 4 mm subgingivally and interproximally - on all oral surfaces. Calculus is subsequently much easier to detect and then only needs to be removed selectively with piezoceramic ultrasonic (GBT Step 6). Only in periodontitis and peri-implantitis patients is the biofilm removed in addition beforehand with subgingival AIR-FLOWING® in pockets deeper than 4 mm up to 9mm (GBT Step 5). Steps 7 and 8 include quality control, final diagnose for caries, fluoridation and scheduling of the next recall appointment (for more details, also on the instruments and consumables to be used, see the homepage <https://www.ems-dental.com/de/guided-biofilm-therapy>).

#### Extensively documented clinically

Dental practices work with different concepts. Mostly these still employ the old methods. As can be observed in numerous articles, there is no consensus; rather, there is considerable confusion. For Adina Mauder, the traditional method with rubber cups, brushes and "polishing paste" is no longer an option: "There is no alternative to Guided Biofilm Therapy. This is a scientifically based method, a seal of quality which provides safety. Every single step has been backed up by EMS with many years of clinical experience from users, but also with numerous studies."



Figs. 3 and 4: In medical biofilm management, the disclosing agent is always applied before AIR-FLOWING®. The disclosed biofilm serves as a benchmark and assures quality. (Photos: EMS)

*"Bosses understand that everyone needs to work according to the same concept"*

The studies were conducted at renowned universities and dental practices in Germany, Switzerland and many other countries. A comprehensive overview is provided in a recommended article by Dr. Klaus-Dieter Bastendorf, a pioneer of prevention in dental practice[1]. With regard to the methods and products used, the studies demonstrate very good clinical efficacy on the one hand, as well as superior substance sparing and acceptance by the treated patients in many cases on the other. "Other manufacturers cannot match this in terms of scope and depth." The methods and materials used in these studies include supra- and subgingival AIR-FLOWING® (AIRFLOW® and PERIOFLOW®) and piezoceramic ultrasonic debridement (PIEZON® NO PAIN with PS Instrument).

In Mauder's experience during her training sessions in dental practices, identical prevention instruments are usually not available in all treatment rooms. "After completing my GBT training course, which is usually held with the entire team, the practice owners very often wish to have the same modern technology to be available to all their staff." This is usually a combination device, the AIRFLOW® Prophylaxis Master with AIRFLOW® MAX, PERIOFLOW® and PIEZON® NO PAIN handpieces, integrated into a mobile and compact all-in-one prevention workstation. "This unit enables more effective, precise as well as more economical working." (Fig. 5).

In times of an increased infection risk, the new AIRFLOW® MAX handpiece with patented Laminar AIRFLOW® Technology (LAT) also ensures significantly reduced aerosol formation.

According to Mauder, a high vacuum suction technique and a lip-cheek holder (e.g. Optragate), which allows the clinician to work with both hands in an ergonomically optimal manner, also make an important contribution to infection protection.

### Gentle and caring - for the patient and clinician

In her courses, Adina Mauder explains how to make GBT treatment a pleasant experience for both patients and their clinicians. "This begins with the acoustics, which cannot be compared to the unpleasant high-pitched sound of sonic debridement." After AIR-FLOWING®, clinicians are often asked by patients when they will start cleaning their teeth. A universally applicable, effective and at the same time gentle powder (AIRFLOW® PLUS powder, erythritol) is used. Salty-tasting sodium bicarbonate powder (AIRFLOW® CLASSIC Comfort) is only required in cases of very pronounced discoloration.

The original piezoceramic PIEZON® NO PAIN PS instrument is also very gentle when used correctly, as well as being virtually silent and painless. It is suitable for removing hard deposits in 95% of all cases. EMS offers a training tool for the correct use of the PIEZON® PS instrument: <https://gbt-dental.com/PIEZON-PS-Tool-Kit>.

The piezoceramic disks move the PS instrument linearly at a particularly small amplitude. Use the PS instrument without applying pressure parallel to the surface like a windscreen wiper. When I treat children, I call it my magic wand." According to Adina Mauder, prevention therapists benefit from the excellent ergonomics of the instruments used for GBT. As significantly fewer or even no hand instruments are needed any more, the dreaded carpal tunnel syndrome of the wrists is no longer to be expected. The clearly structured treatment concept makes the entire workflow more efficient and requires fewer aids overall.

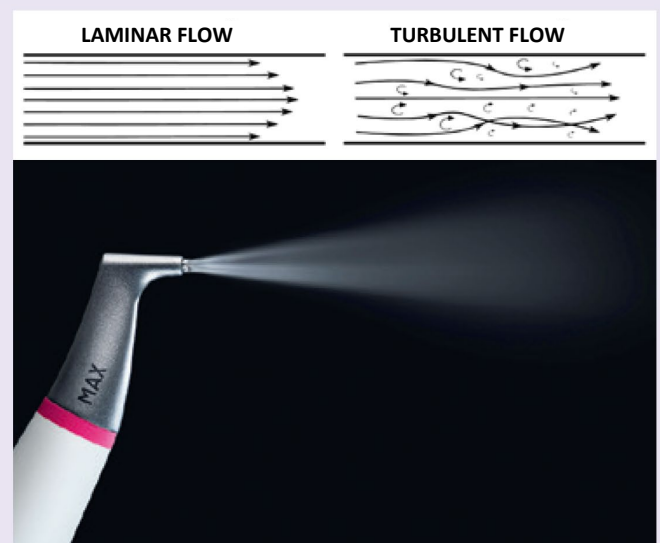


Fig. 5: The AIRFLOW® Prophylaxis Master with the innovative AIRFLOW® MAX handpiece. Here, the laminar air-powder-water flow ensures high efficiency while at the same time strongly reducing aerosols. (Photo: EMS)

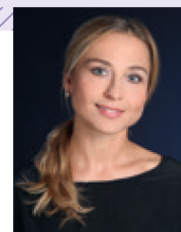
"Switching is also worth it from an economical point of view"

In terms of cost-effectiveness, Adina Mauder refers to feedback from her course participants. She often hears how positive her training affects the mood in a dental practice: the entire team "blossoms" and "bursts with energy". Apparently, the impact of a positive change should not be underestimated. Accordingly, Adina Mauder is convinced that switching is worthwhile, not only clinically, but also economically. "Every prevention patient is a private patient. And they deserve something special." ■

Interview: Dr. Jan H. Koch

### Adina Mauder

1995 Graduation dental assistant (Regional Dental Association (LZÄK) Brandenburg)  
2004 Graduation prevention assistant, (Dental Association (ZÄK) Berlin, Philipp-Pfaff-Institut)  
2009 Graduation dental hygienist (Association of Dentists (LZK) Bavaria, FA-Dent, in cooperation with the Ludwig-Maximilian University Munich,  
2005–2015 Practice Dr. Derk Siebers, MSc. Periodontology and implantology (Berlin)  
Since 2011, development and implementation of training courses and webinars for the Swiss Dental Academy  
Since 2016, leading functions and further education activities in the field of dental hygiene,  
currently dental practice Dr. Ziegler (KU64, Berlin)  
Since 2017, consultant EMS (Nyon, Switzerland)  
Since 2020, certified GBT trainer  
Member of the German Society of Parodontology (DG PARO), the German Society of Preventive Dentistry (GPZ), the German Professional Association of Dental Hygienists (BDDH)



### References

- [1] Bastendorf K, Strafela-Bastendorf N. Auf das klinische Protokoll kommt es an – PZR, UPT und GBT. Quintessenz 2020;71:1380-1389.
- [2] Bastendorf KD, Strafela-Bastendorf N, Mann P. Pilotstudie: Verbessert das Anfärben der Plaque die Ergebnisse einer PZR? Plaque N Care 2016;2:91-93.

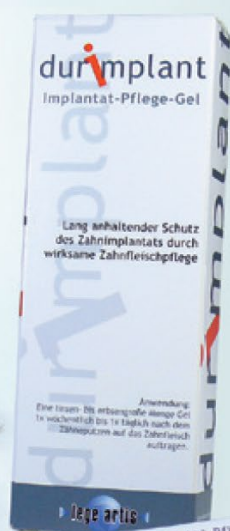


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