GUIDED BIOFILM THERAPY
CARIES AND PERIO PREVENTION AND MAINTENANCE

Evidence based protocols for biofilm management on teeth, soft tissues and implants.
THE MINIMALLY INVASIVE WAY

- NO MORE RUBBER CUPS
- NO MORE BRUSHES
- NO MORE PASTE
- LESS USE OF POWER AND HAND INSTRUMENTATION
THE NEW AND MODERN WAY

ONLY THE BEST FOR MY PATIENTS
ONLY THE ORIGINALS

“I FEEL GOOD”
THE 8 STEPS OF THE

08 RECALL
Healthy Patient = Happy Patient
- Schedule recall frequency according to risk assessment
- Ask your patient if he or she liked the treatment

07 CONTROL
Make Your Patient Smile
- Do a final check for remaining biofilm
- Ensure calculus is fully removed
- Accurately diagnose caries
- Protect with fluoride

06 PIEZON®
Remove Remaining Calculus
- Use the minimally invasive EMS PS instrument supra- and sugingivally up to 10 mm
- Clean > 10 mm pockets with mini curette
- Use EMS PI instrument around implants and restorations

05 PERIOFLOW®
Remove Biofilm in >4 to 9 mm Pockets
- Use PLUS Powder on teeth and implants
- Also remove biofilm interdentally
- Use depth marked PERIOFLOW® nozzle
01 DIAGNOSE
PROBE AND SCREEN EVERY CLINICAL CASE
▶ Healthy teeth, caries, gingivitis, periodontitis
▶ Healthy implants, mucositis, peri-implantitis
▶ Start by rinsing with BacterX mouthwash

02 DISCLOSE
MAKE BIOFILM VISIBLE
▶ Show patient disclosed biofilm ▶ The color will guide the biofilm removal ▶ Once biofilm is removed, calculus is easier to detect

03 MOTIVATE
RAISE AWARENESS AND TEACH
▶ Emphasize on prevention ▶ Instruct your patients on oral hygiene ▶ Recommend Sonicare toothbrushes and interdental brushes or Airfloss Ultra

04 AIRFLOW®
REMOVE BIOFILM, STAINS AND YOUNG CALCULUS
▶ Natural teeth, restorations and implants ▶ Remove biofilm supra- and subgingivally up to 4 mm using PLUS 14 μm powder ▶ Remove remaining stains on enamel using CLASSIC COMFORT powder. ▶ Also remove biofilm from gingiva, tongue and palate
Dental biofilm is the main etiologic factor for caries, periodontal and peri-implant infections. Periodontitis can increase the risk of systemic diseases, such as cardiovascular and respiratory disease, arthritis or diabetes.

Regular oral hygiene, combined with professional measures keeps the biofilm under control – for a better oral and systemic health. Axelsson and Lindhe established preventive dentistry in the 1970ies with studies and clinical protocols based on prophylaxis in “recall hours”.

GBT follows the recommendations on Professional Mechanical Plaque Removal (PMPR) and Oral Hygiene Instructions (OHI) for Home Care of the European Federation of Periodontology (EFP).

“Periodontal Health – for a better life!”

DENTAL PROPHYLAXIS IS TRADITIONALLY PERFORMED IN THIS ORDER:

1. Removal of calculus with hand instruments and scalers, which may be painful and invasive and scratch dental and implant surfaces.

2. Polishing with rotary rubber cups and brushes, which is time-consuming and often messy. Many areas cannot be reached and the gingiva will be affected mechanically. Dental hygienists and assistants know that traditional cleaning can be a painful experience. For this reason, patients may not return for follow-up appointments. Now, almost fifty years later it is time for change.

GUIDED BIOFILM THERAPY IS THE NEW AND STATE-OF-THE-ART APPROACH

1 Before removal the biofilm is always disclosed with a dye solution. Then biofilm and young calculus are easily removed with AIRFLOW® and PERIOFLOW® — supra and subgingivally.

2 If needed this is followed by debridement with PIEZON® PS No Pain piezoceramic instruments.

Guided Biofilm Therapy means that the clinician is guided by the disclosed biofilm during professional tooth cleaning procedures. Guided Biofilm Therapy is truly minimally invasive and reduces the need of hand and sonic/ultrasonic instrumentation. It is safe, effective and gentle to teeth and soft tissues, implants and restoratives.  

GBT is also very comfortable for patients and practitioners. It is efficient and time saving. This also applies to primary caries and perio prevention in children and teenagers.

GBT is part of a comprehensive preventive concept — to preserve your patients’ oral health — and to make the patients feel good.

GBT IS A CLINICALLY SOUND AND PATIENT-ORIENTED CONCEPT

Since 1982 EMS has provided dental practices all over the world with AIRFLOW® air polishing and PIEZON® PS No Pain piezoceramic scaling technology.

In 2003 EMS invented PERIOFLOW® for subgingival biofilm removal — in combination with the AIRFLOW® powder PERIO on a glycine basis. This was an important paradigm shift in perio and preventive dentistry.

In 2012 EMS added the high-tech erythritol-based AIRFLOW® powder PLUS with a particle size of only 14 μm.

Guided Biofilm Therapy is based on the clinically proven technologies invented by EMS. It was developed in cooperation with highly respected and experienced periodontologists, cariologists and dental hygienists.

GBT is a systematic, predictable, risk-oriented and user-friendly treatment which can be adapted to all age groups and each individual patient.

6 O’Hehir TE. How subgingival air polishing will turn dental hygiene upside down. Interview with Prof. Dr. Thomas Flemmig. dentaltown.com 2014:94-96.  
WHAT GBT

AIRFLOW® POWDER PLUS IS THE FIRST HIGH TECH POWDER WHICH REMOVES BIOFILM AND YOUNG CALCULUS FROM:

- Enamel
- Dentine
- Soft tissues
- Tongue and palate
- Primary teeth
- Orthodontic appliances
- Implant surfaces
- Restorations

Above cemento-enamel junction

Subgingival up to 4mm

Subgingival up to 9mm

Supra and subgingival up to 10mm.

Subgingival up to 4mm around implants

Subgingival up to 9mm around implants

Around implant abutments
STANDS FOR

**Preserve Healthy Teeth**

- GBT steps 01 Diagnose and 02 Disclose, followed by AIRFLOW®, enable complete biofilm removal on teeth and restorations. AIRFLOW® preserves dentin and enamel in permanent and primary teeth.

- **No Biofilm = No Caries**

**Detect Caries at Early Stage**

- GBT step 07 Control provides more accurate and precise early caries detection. Caries often develops in areas not accessible by rubber cups or brushes, including interdental areas, fissures and fixed orthodontic appliances. AIRFLOW® cleans it all - and allows fluoride to reach the tooth.

- **No Biofilm = Better Diagnosis**

**Preserve Restorations**

- GBT step 04 AIRFLOW® minimizes mechanical instrumentation, helping to preserve restorations for a longer time. AIRFLOW® powder PLUS is minimally invasive to restorative materials.

- **GBT = Gentle on Restorations**

**Preserve Healthy Soft Tissues**

- GBT step 04 AIRFLOW® removes biofilm in a minimally invasive way. AIRFLOW® powder PLUS has been proven to be gentle on the gingiva and other soft tissues, while rotary and hand instruments may damage them.

- **GBT = Gentle on Soft Tissues**

**Treat Gingivitis**

- GBT step 04 AIRFLOW® easily and safely removes biofilm and young calculus from coronal surfaces and the sulcus. In the case of hard calculus the PIEZON® PS No Pain piezoceramic scaler (step 06) provides minimally invasive debridement.

- **GBT = Efficient and Patient-Friendly**

**Treat Residual Pockets**

- GBT steps provide a minimally invasive method to protect implant surfaces. 04 AIRFLOW® and 05 PERIOFLOW® with powder PLUS are gentle on implant surfaces, while metal instruments may scratch them.

- **GBT = Implant Protection**

**Treat Mucositis**

- GBT steps 04 AIRFLOW®, then 05 PERIOFLOW® effectively prevent and treat mucositis. When used with powder PLUS, this protocol is efficient and minimally invasive to peri-implant tissues.

- **GBT = Gentle on Peri-Implant Tissues**

**Treat Peri-Implantitis**

- GBT step 05 PERIOFLOW® with powder PLUS tends to control peri-implant bleeding better than alternative methods. In the case of hard calculus the PIEZON® PI No Pain piezoceramic scaler provides minimally invasive debridement.

- **GBT = Reduced Inflammation**
THE ORIGINAL.

THE AIR-FLOW MASTER PIEZON®

The original from the Inventor. Guaranteed Swiss Precision and superb design. Reliability and know-how since 1981.
THE MASTER.

THE AIR-FLOW MASTER®

THE PIEZON® MASTER 700
AIRFLOW® REMOVES BIOFILM, STAINS AND YOUNG CALCULUS. CLEANS AND POLISHES IN ONE SINGLE PROCEDURE.

- After the use of AIRFLOW® no extra polishing with rubber cups/paste is necessary anymore.
- Dental offices using AIRFLOW® and GBT have more and happier recall patients.
- Professional prophylaxis is becoming an important economic factor.¹

DOUBLE SPRAY
Powder inside
Rinsing around

With rubber cups and polishing paste it is impossible to clean:
- Interdental spaces, especially in patients with mal-aligned teeth
- Exposed tooth necks
- Pits and fissures
- Orthodontics brackets

AIRFLOW® will remove biofilm and young calculus in all these situations. It also cleans the gingival or peri-implant sulcus to a depth of 4mm.²⁻⁴ At the same time AIRFLOW® is fast, efficient and comfortable for the patient.

TOOTH ENAMEL SURFACE WITH RESIDUAL BIOFILM BEFORE CLEANING.

- The enamel prisms of the natural tooth enamel are easily recognizable – The photo shows the remnants of the bacteria killed off with sodium hypochlorite.\(^5\)

TOOTH ENAMEL AFTER POLISHING WITH LOW-ABRASIVE PASTE (RDA 27).

- The vital enamel prisms have been polished away. Pastes have caused scratches. Biofilm has been spread into natural crevices.
- Overall abrasive pastes cause a loss of valuable enamel. No improvement of the dental surface.\(^5\)

TOOTH ENAMEL AFTER CLEANING WITH AIRFLOW® POWDER PLUS

- The biofilm has been completely removed with AIRFLOW®. The surface is clean down to the pores. No abrasion. The enamel prisms remain intact and the surface is perfectly smooth. The tongue no longer feels any roughness and there is no need for polishing with (abrasive) pastes. This saves enamel – and treatment time.\(^5\)

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AIRFLOW® POWDERS

AIRFLOW® POWDER PLUS IS THE FIRST HIGH TECH POWDER WHICH REMOVES BIOFILM AND YOUNG CALCULUS IN A MINIMALLY INVASIVE WAY FROM:

- Enamel
- Dentine
- Soft tissues
- Tongue and palate
- Primary teeth
- Orthodontic appliances
- Implant surfaces
- Restorations

COMPETITOR CALCIUM CARBONATE
EMS POWDER PLUS ERYTHRITOL
EMS SODIUM BICARBONATE

EFFECT OF 5 SEC AIR POLISHING ON HUMAN ENAMEL

EFFECT OF 5 SEC AIR POLISHING ON GLASS IONOMER

2. Note: In the study by Barnes, J Clin Dent 2014, the EMS sodium bicarbonate had a particle size of 65 μm. New Powder CLASSIC COMFORT has 40 μm particle size, for more smoothness and patient comfort.
3. Note: For Powder PLUS complimentary tests have been submitted to the J Clin Dent (Barnes CM, et al.)
PERIOFLOW® AND POWDER PLUS ARE INDICATED FOR

- Subgingival biofilm removal (debridement) in ≥4 to 9 mm* periodontal*¹ and peri-implant*² pockets
- Initial and follow-up (SPT) periodontal therapy*³
- Prevention of mucositis / peri-implantitis*⁴
- Initial and follow-up treatment of mucositis/peri-implantitis*⁵

AFTER USING AIRFLOW®, REMOVE REMAINING SUPRA AND SUBGINGIVAL CALCULUS WITH THE PIEZON® NO PAIN* PS INSTRUMENT.

- Linear movement of the PS Instrument = no damage to tooth surfaces and soft tissues. Minimally invasive to root cementum. Dynamic power setting.
- “EMS Perio Slim instrument had the best interproximal and subgingival access.”**

*No PAIN: when used in accordance with EMS instructions and/or the training by the Swiss Dental Academy.
**CRA, Clinical Research Associates, USA
THE INSTRUMENT

SUBGINGIVAL CALCULUS REMOVAL WITH EMS PIEZON® PS INSTRUMENT

ACCURATE CARIES DIAGNOSIS

BEFORE TREATMENT
Caurious lesions may be hidden

AFTER GBT
Lesions are fully visible on clean teeth

EMS PS PERIO SLIM INSTRUMENT IS INDICATED FOR 95% OF ALL CASES.

EMS PI INSTRUMENT IMPLANT CLEANING
"With the EMS devices, we can motivate our patients in terms of prophylaxis. Through a pleasant feeling in the mouth — WELLNESS factor. Removal of stains — BEAUTY factor. 100% plaque removal — HEALTH factor.”

MICHAELA GRUL

"Due to the small particle size of the product, especially the Plus powder, there is practically no traumatic gingivitis anymore. ... We were able to increase turnover in the area of prophylaxis by approx. 50 percent from 2015 to 2016, which is surely also due to the now much more pleasant treatment. The reactions were positive without exception.”

DIRK PALME

"I do not want to do without Airflow technology or Airpolishing in my everyday work. Gentle on substance, clean, pleasant for patients and quicker, particularly in the interdental spaces. The results are accordingly good. Less inflammation, and the tooth necks are no longer sensitive after treatment.”

PETRA NATTERER

"The devices of the company EMS helped us very much to simplify the procedure protocol of our “prophylaxis sessions”, to make it more gentle on substance and more patient-friendly (less pain). After more than 3 years, prophylaxis has become a technically and economically very important part of our dental practice thanks also to the scientific and technical competence (e.g. NoPain with PS tip, Plus powder) of EMS.”

DR. NADINE STRAFELA-BASTENDORF

"I’m so happy with GBT, I could not accept any other tooth cleaning method anymore. Due to GBT I see my dentist regularly and gladly for my prophylaxis. And each time I leave the office I’m happy with my clean and brilliant white smile! To me prophylaxis with GBT has become a great experience and I dearly recommend it!”

SABINE PAVICIC

"AIRFLOW® is cool — super cool.”

MORRIS MEYER (9 YEARS)
The European Federation of Periodontology (EFP) Consensus: Combining home and professional care is a must to preserve natural teeth and implants. EMS and Philips have harmonized their concepts to optimize oral care.

EMS RECOMMENDS PHILIPS SONICARE BECAUSE OF ITS SONIC SPEED AND ITS MINIMALLY INVASIVE EFFICIENCY.

For interdental cleaning Philips AirFloss may be an option. It is an easy-to-use device based on air-water micro-burst technology for interdental areas. AIRFLOSS — as efficient as Dental Silk but easier to use. Philips Sonicare Tonguecare — effective cleaning of the tongue.