GUIDED BIOFILM THERAPY
CARIES AND PERIO PREVENTION AND MAINTENANCE

Evidence based protocols for biofilm management on teeth, soft tissues and implants.
ONLY THE BEST FOR MY PATIENTS
ONLY THE ORIGINALS

NO MORE RUBBER CUPS
NO MORE BRUSHES
NO MORE PASTE
LESS USE OF POWER AND HAND INSTRUMENTATION

THE MINIMALLY INVASIVE WAY

THE NEW AND MODERN WAY

“I FEEL GOOD”

ONLY THE BEST FOR MY PATIENTS
ONLY THE ORIGINALS
**THE 8 STEPS OF THE GBT PROTOCOL**

**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

**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

**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

**07 CONTROL**
- Make your patient smile
  - Do a final check for remaining biofilm
  - Ensure calculus is fully removed
  - Accurately diagnose caries
  - Protect with fluoride

**08 RECALL**
- Healthy patient = happy patient
  - Schedule recall frequency according to risk assessment
  - Ask your patient if he or she liked the treatment
WHY GBT IS A...

- 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 1970’s with studies and clinical protocols based on prophylaxis in “recall hours”. 1-2
- 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). 3-5
- “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.

GAME CHANGER

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. 1-4
- GBT is also very comfortable for patients and practitioners. 5 It is efficient and time saving. This also applies to primary care 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 piezo-ceramic scaling technology.
- In 2003 EMS invented PERIOFLOW® for subgingival biofilm removal — in combination with the AIRFLOW® powder PER10 on a glycine basis. 7 This was an important paradigm shift in peri 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.

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WHAT GBT STANDS FOR

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

PREVENT 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.

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

PREVENT 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.

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.

TREAT MUCOSITIS
- GBT step 05 PERIOFLOW® with powder PLUS maximally preserves cementum and dentin in periodontal maintenance - SPT. It removes subgingival biofilm more efficiently than hand instruments. PIEZON® PS No Pain provides minimally invasive hard calculus debridement.

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.

PREVENT 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.

PREVENT MUCOSITIS
- GBT step 05 PERIOFLOW® with powder PLUS is minimal-invasive to peri-implant tissues.

RETAIN CEMENTUM
- 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.

TREAT EFFICIENT AND PATIENT-FRIENDLY
- GBT = EFFICIENT AND PATIENT-FRIENDLY

TREAT GENTLE ON PERI-IMPLANT TISSUES
- GBT = GENTLE ON PERI-IMPLANT TISSUES

TREAT REDUCED INFLAMMATION
- GBT = REDUCED INFLAMMATION

PRESERVE CEMENTUM
- 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.

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.

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

PRESERVE MUCOSITIS
- 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.

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The Swiss Made AIRFLOW® Prophylaxis Master was developed in the EMS Research Centre with more than 100,000 hours of technical and clinical testing in collaboration with leading dental professionals from all over the world.

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

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. At the same time AIRFLOW® is fast, efficient and comfortable for the patient.
**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**

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 CH, et al.)

**EFFECT OF 5 SEC AIR POLISHING ON GLASS IONOMER**


**PERIOFLOW® AND POWDER PLUS ARE INDICATED FOR**

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

**PERIOFLOW® AND POWDER PLUS SPRAYS + water rinsing**

1. 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 CH, et al.)
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

COURTESY OF DR. WOLFGANG GUTWERK
COURTESY OF PROF. MAGDA MENSJ

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COURTESY OF PROF. MAGDA MENSJ

ACCURATE CARIES DIAGNOSIS

BEFORE TREATMENT
Lesions are fully visible on clean teeth

AFTER GBT
Lesions are clearly visible on clean teeth

COURTESY OF DR. WOLFGANG GUTWERK

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

COURTESY OF DR. WOLFGANG GUTWERK

EMS PI INSTRUMENT IMPLANT CLEANING
“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 Airpolishing in my everyday work on tooth substance, clean interdentally for patients and quickly, 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

“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

““AIRFLOW® is cool – super cool.”

MORRIS MEYER (9 YEARS)

“GBT IS COOL...”

“EMs and Philips cooperate

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.

**“AIRFLOW® is cool – super cool.”**

MORRIS MEYER (9 YEARS)
SMILE IS IN THE AIR

“IT FEEL GOOD”

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