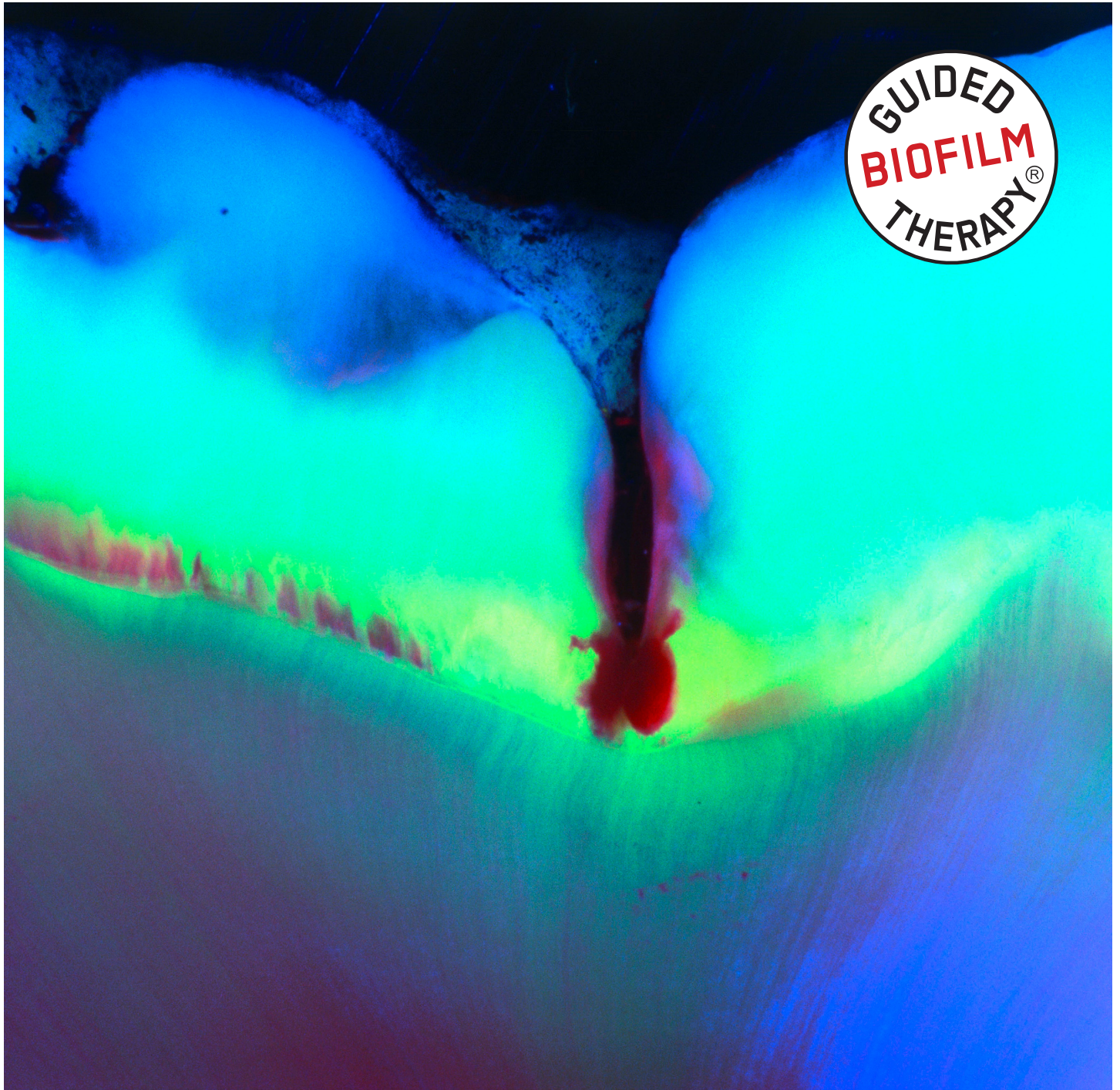


GUIDED **BIOFILM** THERAPY

SUMMARIES OF TOP STUDIES 2022 - VOL. 2



Histological section of a human tooth:
Tooth with occlusal caries

Courtesy: Prof. Adrian Lussi
www.zahnkunstbilder.ch

SDA 
SWISS DENTAL ACADEMY

THE **GBT** COMPASS AND ITS 8-STEP PROTOCOL



08 RECALL

HEALTHY PATIENT = HAPPY PATIENT

- Schedule recall frequency according to risk assessment
- Ask your patient if he or she liked the treatment

07 CHECK

MAKE YOUR PATIENT SMILE

- Do a final check for remaining biofilm
- Ensure calculus is fully removed
 - Accurately diagnose caries
 - Protect with fluoride
 - No polishing anymore

06 PIEZON® PS

REMOVE REMAINING CALCULUS

- Use the minimally invasive EMS PIEZON® PS Instrument supra- and subgingivally up to 10 mm
- Clean > 10 mm pockets with mini curette
- Use EMS PIEZON® PI Instrument around implants up to 3 mm subgingivally and on restorations

05 PERIOFLOW®

REMOVE BIOFILM IN >4 TO 9 MM POCKETS

- Use AIRFLOW® PLUS Powder on natural teeth in deep pockets and root furcations and on implants
- Use new and slimmer PERIOFLOW® Nozzle

01 ASSESSMENT AND INFECTION CONTROL

ASSESS EVERY CLINICAL CASE AND IMPLEMENT HYGIENE MEASURES

- Start by rinsing with BacterX® Pro mouthwash
- Assess teeth, gingiva and periodontal tissues
- Assess implants and peri-implant tissues

02 DISCLOSE

MAKE BIOFILM VISIBLE

- Highlight to patients the disclosed biofilm and their problematic areas with EMS Biofilm Discloser
- The color will guide biofilm removal
- Once biofilm is removed, calculus is easier to detect

03 MOTIVATE

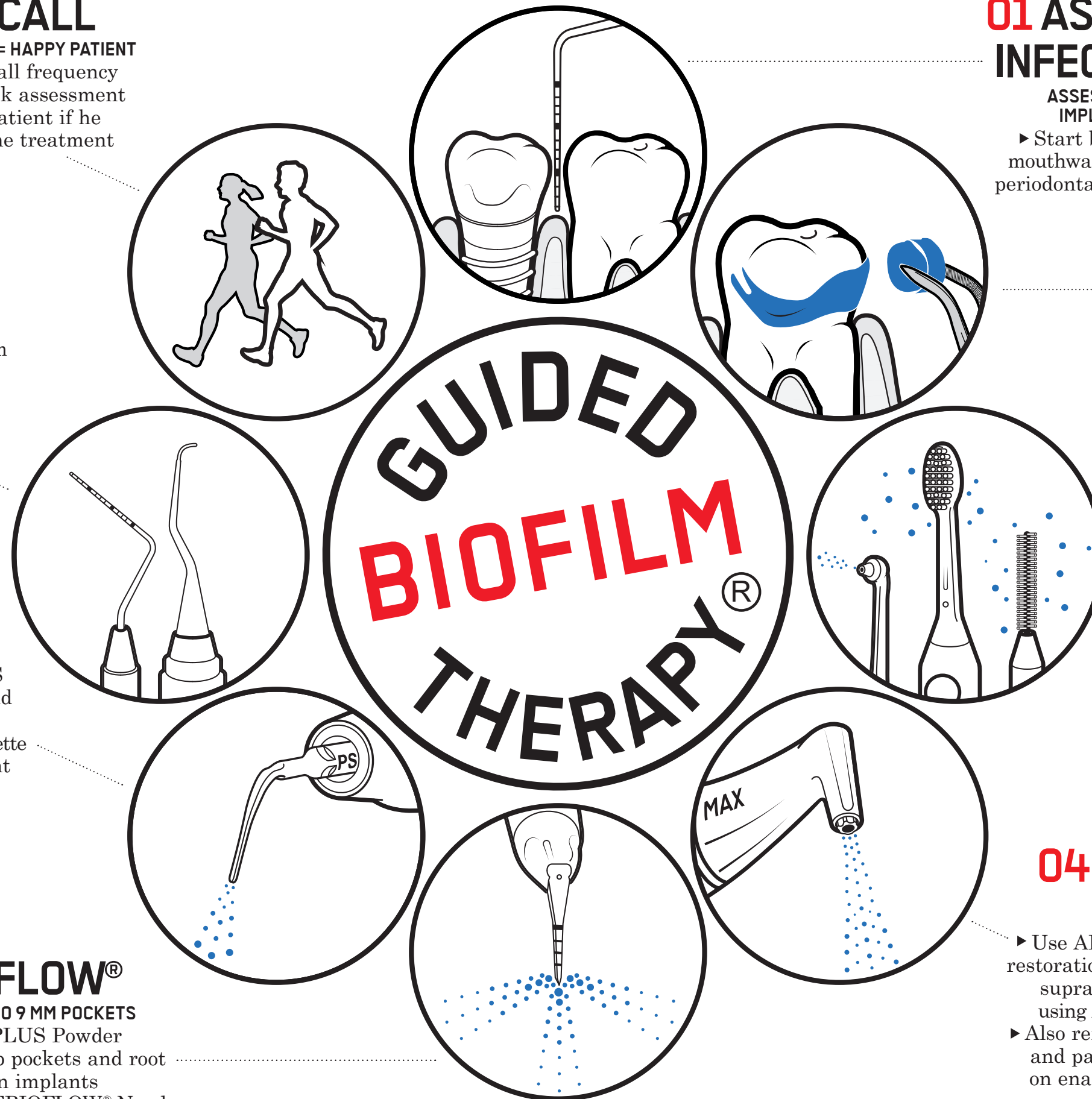
RAISE AWARENESS AND TEACH

- Emphasize the importance of prevention
- Instruct your patients in oral hygiene
- EMS recommends interdental brushes or dental floss as well as electric or manual toothbrushes and AIRFLOW® erythritol toothpaste for daily home care

04 AIRFLOW® MAX

REMOVE BIOFILM, STAINS AND EARLY CALCULUS

- Use AIRFLOW® MAX for natural teeth, restorations and implants
- Remove biofilm supra- and subgingivally up to 4 mm using AIRFLOW® PLUS 14 µm Powder
- Also remove biofilm from gingiva, tongue and palate
- Remove remaining stains on enamel using AIRFLOW® CLASSIC Comfort Powder



1. CUSTOMIZED MINIMALLY INVASIVE PROTOCOLS FOR THE CLINICAL AND MICROBIOLOGICAL MANAGEMENT OF THE ORAL MICROBIOTA.

Scribante, A; Butera, A; Alovise, M.
Microorganisms 2022, 10, 675

CLINICAL RELEVANCE

► This article reinforces not only the minimally invasive nature of AIR-FLOWING® with glycine- and erythritol-based powders but also mentions the gentleness on the hard and the soft oral tissues in addition to the reduction of the bacterial load of the red complex, with a higher percentage of reductions in Porphyromonas gingivalis in periodontal and patients with implants.

2. THE EFFICACY OF THE ADJUNCT USE OF SUBGINGIVAL AIR-POLISHING THERAPY WITH ERYTHRITOL POWDER COMPARED TO CONVENTIONAL DEBRIDEMENT ALONE DURING INITIAL NON-SURGICAL PERIODONTAL THERAPY

Tihana Divnic-Resnik; Harold Pradhan; Axel Spahr
J Clin Periodontol. 2022;1–9

CLINICAL RELEVANCE

► The adjunct use of subgingival AIR-FLOWING® with erythritol powder during initial non-surgical periodontal therapy could be beneficial in deep pockets of probing depths ≥ 5.5 mm. AIR-FLOWING® helped reduce deep pockets to shallow pockets with improved attachment level.

3. EFFECT OF DIFFERENT ENAMEL PRETREATING AGENTS ON BONDING EFFICACY AND SURVIVAL RATES OF ORTHODONTIC BRACKETS: IN VITRO STUDY AND SPLIT-MOUTH RANDOMIZED CLINICAL TRIAL

Andrea Scribante, Simone Gallo, Maurizio Pascadopoli, Federico Catalano, Paola Gandini, Maria Francesca Sfondrini
American Journal of Orthodontics and Dentofacial Orthopedics, Online 7th June, 2022
<https://doi.org/10.1016/j.ajodo.2022.05.010>

CLINICAL RELEVANCE

► This study tested the different enamel pretreatment procedures adopted before bonding and the different pretreating agents used today both in vitro and clinically.
► Use of Erythritol AIR-FLOWING® pretreatment showed lower-bracket failure rates in comparison to sodium bicarbonate.
► Erythritol AIR-FLOWING® is suitable for enamel pretreatment before bonding procedures in orthodontic patients.

4. EFFICACY OF AIR POLISHING IN COMPARISON WITH HAND INSTRUMENTS AND/OR POWER-DRIVEN INSTRUMENTS IN SUPPORTIVE PERIODONTAL THERAPY AND IMPLANT MAINTENANCE: A SYSTEMATIC REVIEW AND META-ANALYSIS

Shiuan Lee Tan, Galvinderjeet Kaur Grewal, Nor Shafna Mohamed Nazari, Tuti Ningseh Mohd Dom and Nor Adinar Baharuddin
BMC Oral Health (2022) 22:85

CLINICAL RELEVANCE

► Another systematic review and meta-analysis shows that in natural teeth repeated subgingival debridement using AIR-FLOWING® resulted in similar clinical outcomes in terms of Probing Pocket Depth (PPD) reduction in comparison to hand scaling and/or power-driven instruments in Supportive Periodontal Therapy patients but with a higher patient compliance.
► However, during implant maintenance, repeated subgingival debridement with AIR-FLOWING® has the potential to improve clinical outcomes.

SIX HEXAGONAL WATER CHANNELS FOR MORE PRECISION AND SUBSTANTIAL AEROSOL REDUCTION.



5. SIMULATED AND CLINICAL AEROSOL SPREAD IN COMMON PERIODONTAL AEROSOL GENERATING PROCEDURES

Anthony Puljich, Kexin Jiao, Ryan S. B. Lee, Laurence J. Walsh, Sašo Ivanovski, Pingping Han
Clin Oral Invest (2022). <https://doi.org/10.1007/s00784-022-04532-8>

CLINICAL RELEVANCE

► For all aerosol-generating procedures (AGP), use of a pre-rinse before treatment followed by use of a high-volume suction during treatment significantly reduces the bacterial contamination in the mouth.

6. INFLUENCE OF FLOW RATE AND DIFFERENT SIZE OF SUCTION CANNULAS ON SPLATTER CONTAMINATION IN DENTISTRY: RESULTS OF AN EXPLORATORY STUDY WITH A HIGH-VOLUME EVACUATION SYSTEM

Christian Graetz, Viktor Hülsbeck, Paulina Düfert, Susanne Schorr, Martin Straßburger; Antje Geiken1 · Christof E. Dörfer; Miriam Cyris
Clinical Oral Investigations <https://doi.org/10.1007/s00784-022-04525-7>

CLINICAL RELEVANCE

► In this study the splatter production between high-speed tooth preparation (HSP), air-polishing-LM-ProPower™ (Finland) and AIRFLOW®-Prophylaxis-Master (Switzerland) was measured with different suction cannulas of 6 mm diameter (saliva ejector), 11 mm (HC11) and 16 mm (HC16). Use of a 16mm cannula showed the lowest splatter contamination. This is in line with the high-vacuum suction we are using from Pure vac today with a high flow rate of ≥ 250 l/min.



7. AEROSOL CONTAMINATION IN THE DENTAL PRACTICE FOLLOWING EVERYDAY PROCEDURES

Magda Mensi, Silvia Marchetti, Luca Mantelli, Eleonora Scotti, Annamaria Sordillo, Stefano Calza and Niklaus P. Lang
J Clin Res, Volume 6:1, 2022

CLINICAL RELEVANCE

- Routine professional oral hygiene procedures including application of AIR-FLOWING®, ultrasonic instrumentation, hand instrumentation and rubber cups do not result in higher bacterial counts in comparison to baseline.
- AIR-FLOWING® using high-vacuum evacuation(HVE) produced lowest aerosols.
- Use of correct suctioning devices, technique and preprocedural disinfection mouth rinses minimize the aerosol contamination in the dental office.
- Highest contamination was seen during caries excavation with a turbine and low-vacuum evacuation (LVE)

Group	Estimated concentration (95% CI)
Baseline	1.45 (0.85-2.04)
Air-polishing HVE	1.44 (0.57-2.32)
Ultrasonic Inst.	1.44 (0.49-2.40)
Rubber Cup	1.10 (0.30-1.89)
Manual Inst.	1.13 (0.32-1.95)
Turbine	7.38 (3.87-10.89)
Turbine HVE	2.98 (1.34-4.63)
1:5 contra-angle HVE	2.70 (0.18-4.22)
CI: Confidence Interval	

Mean bacteria air load (CFU/Lair) and confidence interval per each procedure performed.

UNIVERSITY NEWS

CLINICAL UPDATES FROM UNIVERSITIES

Muscholl C, Frese C, Schick S, Kim T-S, Büsch C, Ciardo A
Clinical evaluation of the effectiveness of two mechanical biofilm removal methods
Heidelberg University Hospital, Germany

Poster: Clara.Muscholl@med.uni-heidelberg.de
In a comparison between hand instrument and polishing pastes vs erythritol powder
AIR-FLOWING®, mechanical biofilm removal using AIR-FLOWING® proved more
effective than conventional methods.



GBT QUOTES

CLINICAL UPDATES FROM UNIVERSITIES

At the German spring conference of DGKiZ (German Society for Pediatric Dentistry),
there was a great quote regarding AIR-FLOWING® from Prof. Christopher Lux,
University Heidelberg:

“Disclosing the teeth and cleaning them with AIRFLOW® devices has proven to be an
especially uncomplicated and gentle method. The low-abrasive erythritol powder is
suitable.”



Prof. Christopher Lux. © Kromer-Busch

