

**AIR-FLOW®  
KILLS  
BIOFILM**

A scanning electron micrograph (SEM) showing a dense, textured surface of a biofilm. The surface is covered with numerous small, rounded bacterial cells. Several larger, elongated, rod-shaped bacteria are prominent, some appearing to be in the process of dividing or budding. The overall appearance is highly detailed and three-dimensional, highlighting the complex structure of the microbial community.

# DEEP DOWN,

HIDDEN BETWEEN ROOT SURFACE AND GINGIVA,  
UP TO 1,500 DIFFERENT STRAINS OF BACTERIA WITH  
BILLIONS OF INDIVIDUALS CONTINUE TO DESTROY  
SOFT TISSUE AND BONE UNDER THE COVER OF BIOFILM

# **PROPHYLAXIS,**

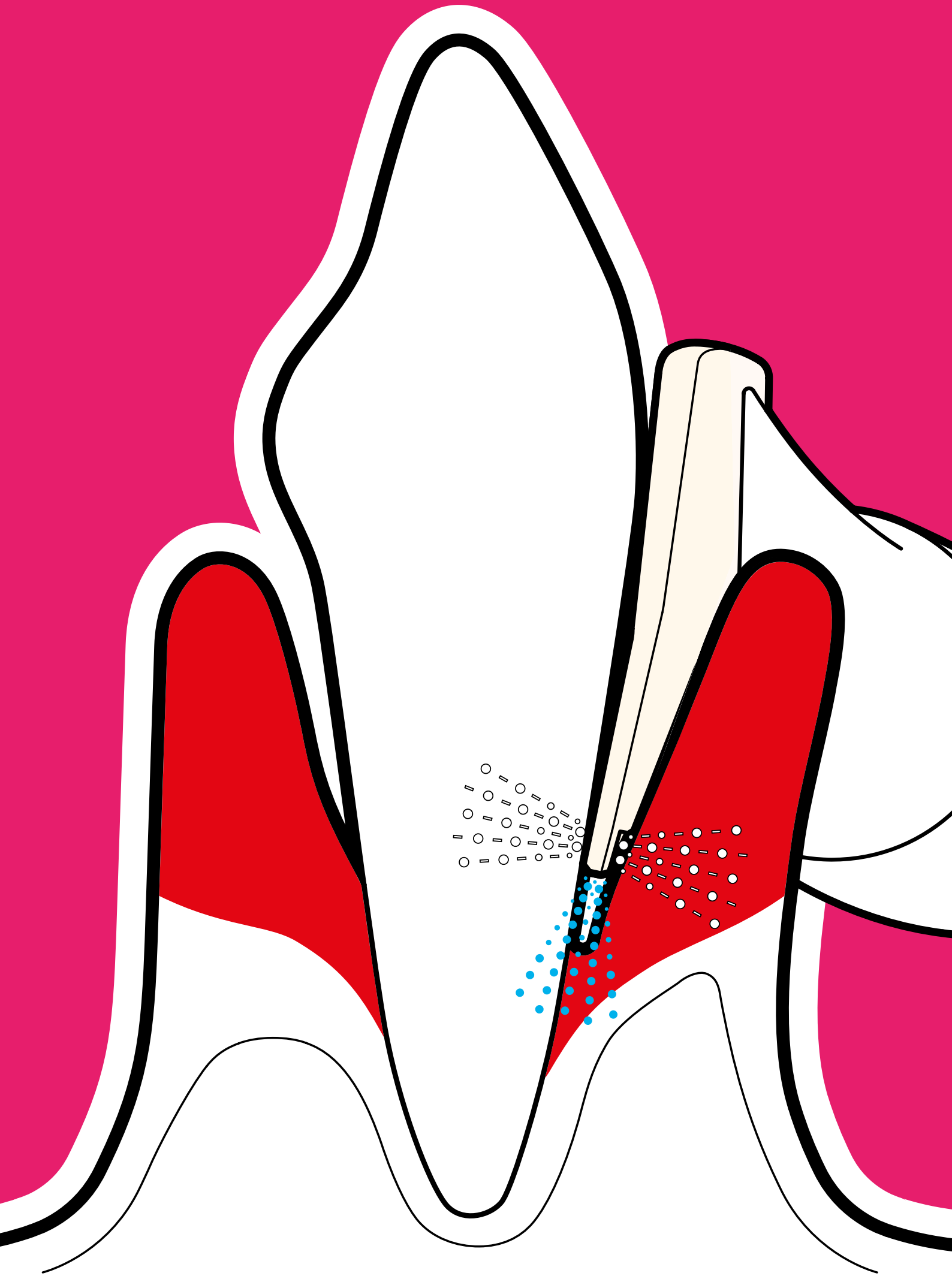
**EVEN IN DEEP AREAS, PREVIOUSLY CONSIDERED OFF LIMITS  
FOR AIR POLISHING, IS NOW A REALITY. ELIMINATE  
BIOFILM WITH THE LATEST DEVELOPMENT FROM THE INVENTOR  
OF THE ORIGINAL AIR-FLOW® METHOD**

**THE ORIGINAL AIR-FLOW®  
METHOD NOW REACHES THE  
DEEPEST PERIODONTAL  
POCKETS. THE NEW PERIO  
NOZZLE AND THE NEW  
AIR-FLOW® POWDER PERIO  
COMBINE TO DELIVER  
GREATER EFFICACY AND  
MUCH MORE PATIENT  
COMFORT THAN CONVEN-  
TIONAL CURETTES  
OR OTHER INSTRUMENTS →**

**A NEW AIR POLISHING DEVICE FOR REMOVING SUBGINGIVAL PLAQUE**

> The new treatment was perceived more acceptable and was more time efficient than scaling and root planning (SRP), however on a microbiological level was not superior to conventional SRP

Moëne R., Décaillet F., Andersen E., Mombelli A., School of Dental Medicine, University of Geneva, Switzerland – Journal of Dental Research 2009



**AIR-FLOW MASTER®**

INNOVATION

# NEW → AIR-FLOW MASTER®

THE WORLD'S FIRST  
SUBGINGIVAL PROPHYLAXIS  
UNIT



2 APPLICATION SYSTEMS  
IN ONE →

PERFECT FOR SUBGINGIVAL  
AND SUPRAGINGIVAL TREATMENT

3-TOUCH PANEL →

EASY SWITCHING BETWEEN SYSTEMS  
EASY SETTING OF APPLICATIONS





EMS

EMS

MAX

MIN

AIR-FLOW®

MAX

MIN

PERIO-FLOW®

AIR-FLOW MASTER®

Min

Liquid

Max

PERIO-FLOW

AIR-FLOW

Max

**TOUCH  
'N'  
FLOW**

## AIR-FLOW MASTER®

COMPLETE

### TWO POWDER CHAMBERS →

- > Large capacity for many applications
- > See-through and illuminated to visualize refill
- > Easy to remove, clean and refill

### POWDER CHAMBER FOR AIR-FLOW® POWDER CLASSIC

#### AND AIR-FLOW® POWDER SOFT →

- > Uniform powder flow, no clogging
- > 100 g capacity for AIR-FLOW® Powder CLASSIC
- > 65 g capacity for AIR-FLOW® Powder SOFT

### AIR-FLOW® HANDPIECE →

- > Supragingival application, also in subgingival border area
- > Free-flow technology
- > Sterilizable at 134° C

### 3-TOUCH PANEL →

- > Self-explanatory, operates by touch
- > Easy to clean surface
- > Blue LEDs for clear display of current setting
- > A pioneering feature and EMS exclusive

### “LIQUID” →

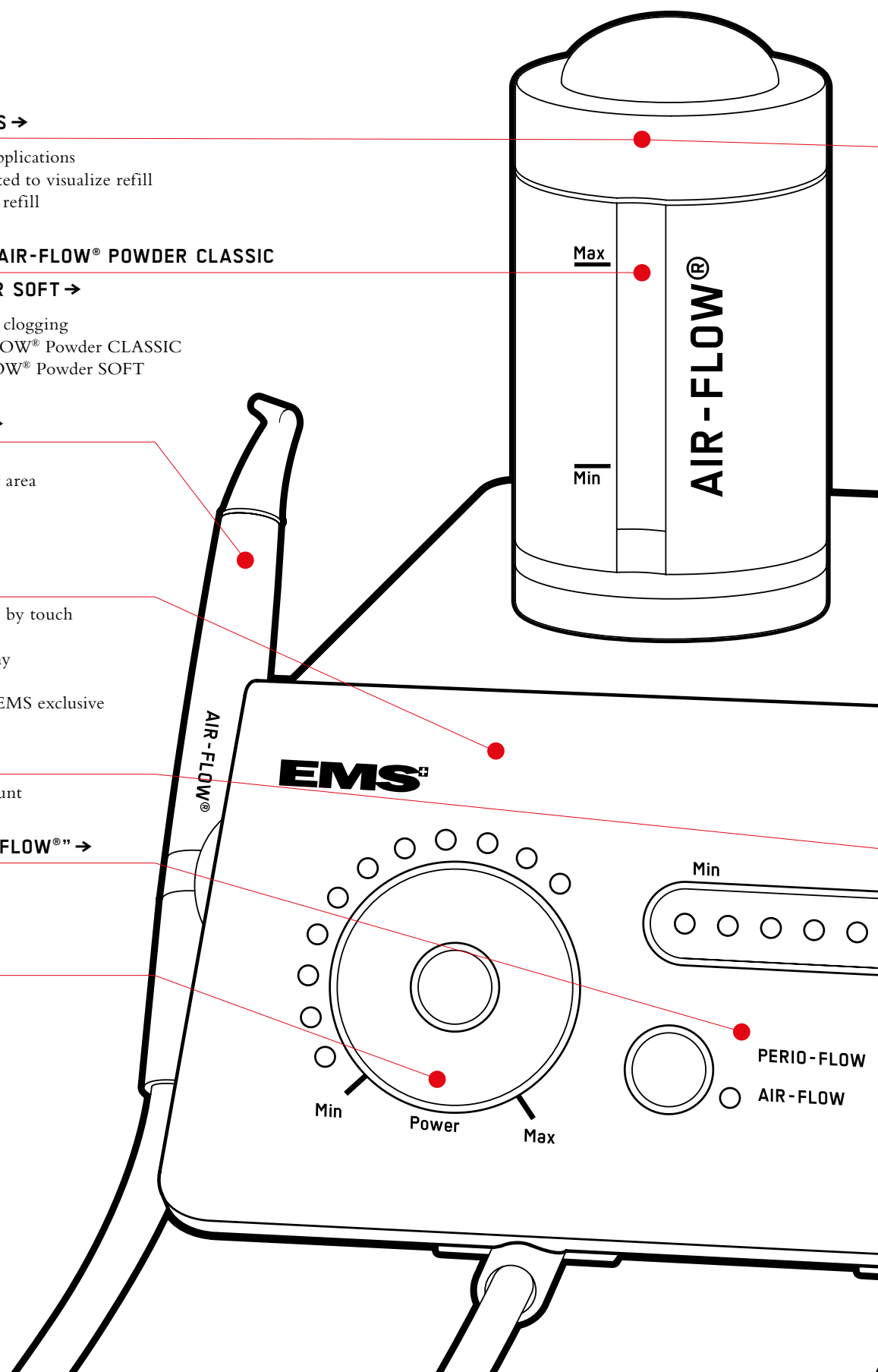
- > Easy control of flow amount

### “PERIO-FLOW® AND AIR-FLOW®” →

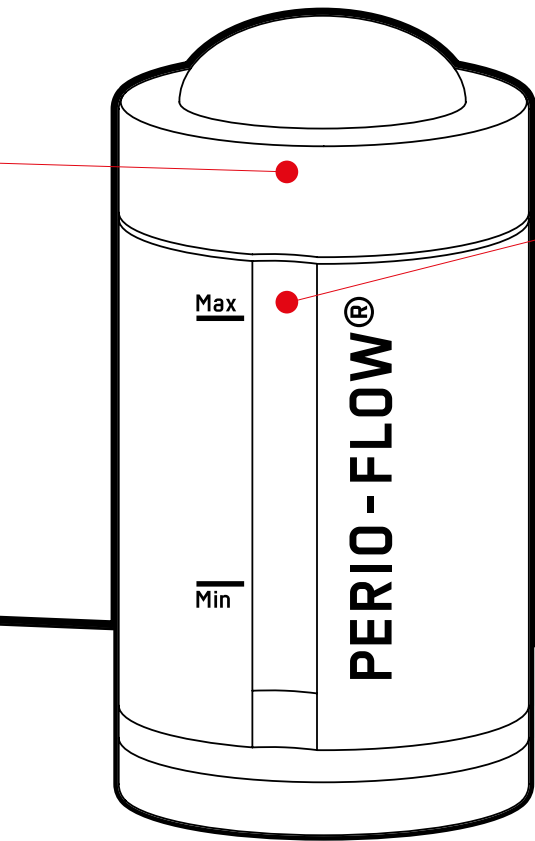
- > Easy switching between treatment modes

### “POWER” →

- > Easy power setting







#### CHAMBER FOR AIR-FLOW® POWDER PERIO →

- > Special geometric design for uniform powder flow
- > 45g capacity for AIR-FLOW® Powder PERIO

#### PERIO-FLOW® NOZZLE →

- > 3 nozzle outlets for air-powder mixture, horizontal
- > 1 nozzle outlet for water, vertical
- > Single-use nozzle
- > Easy to install

#### PERIO-FLOW® HANDPIECE →

- > Subgingival application, down to deep periodontal pockets
- > Free-flow technology
- > Sterilizable at 134° C

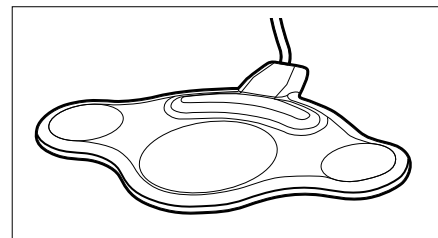
#### PURGE BUTTON →

- > Button on the side of the unit
- > Perfect cleaning of all hoses
- > Optimizes free-flow technology

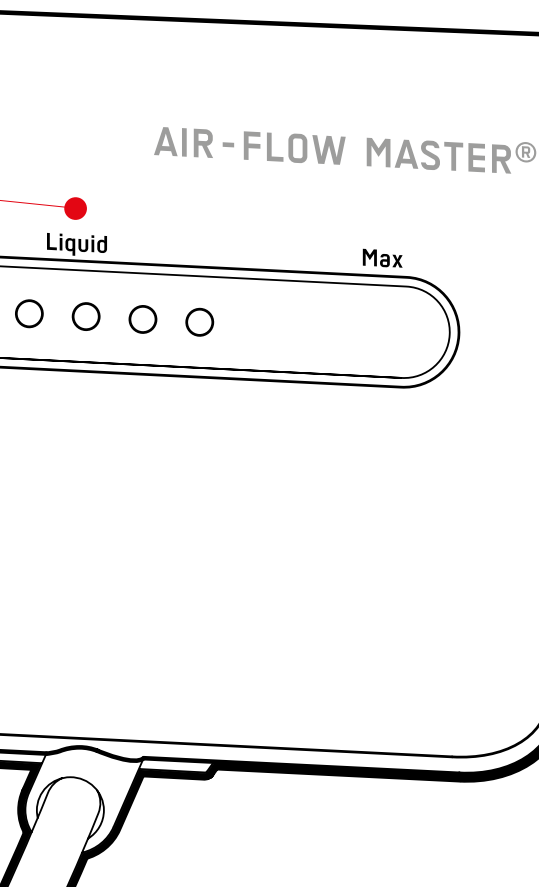
#### HANDPIECE HOLDER →

- > Strong magnet, mobile and sterilizable
- > For flexible use in the practice

#### FOOT PEDAL →



- > 4 function switch incl. power boost

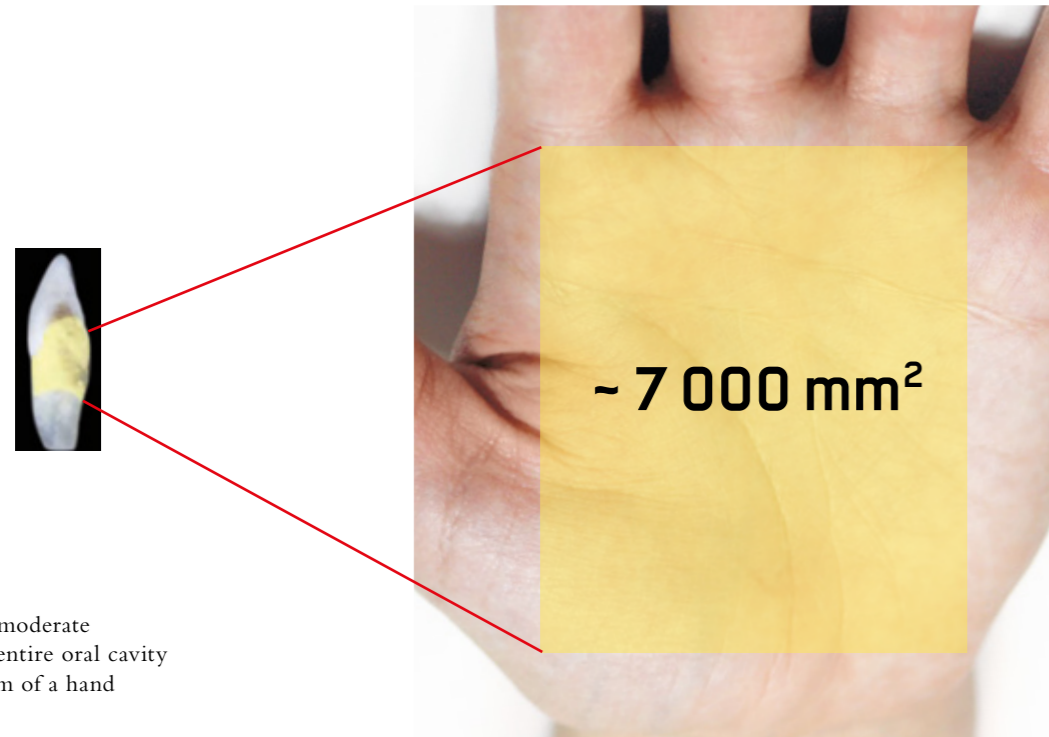


# COMPLETE UNIQUE

# IF YOUR PATIENTS ONLY KNEW →

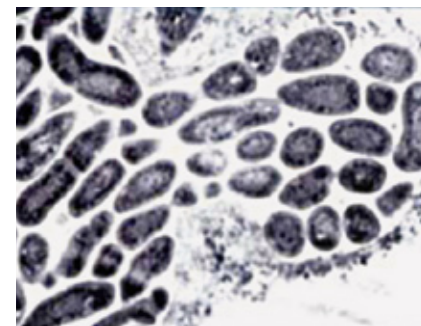
- > Periodontitis is the most common cause of tooth loss
- > Periodontitis affects the entire immune system – often with dramatic effects on the entire body

**FOUR OUT OF FIVE PATIENTS SUFFER FROM A FORM OF PERIODONTITIS**



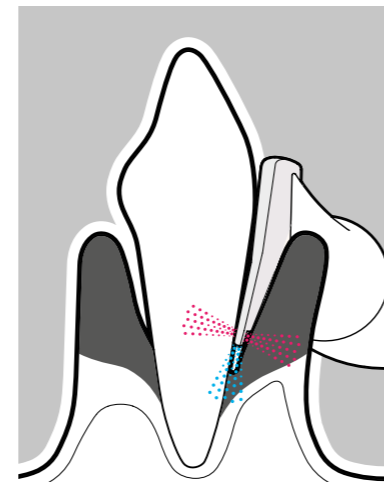
Wound surface of a moderate periodontitis in the entire oral cavity is the size of the palm of a hand

## BIOFILM → THE DIRTY WORD



Biofilm in symbiosis with a variety of bacteria – protected from the outside, proliferating on the inside

- > Micro-organisms colonize the area and grow – their breeding ground develops its own protective layer. Bacteria then separate and colonize other areas
- > Bacteria under cover of biofilm are resistant to drug therapy
- > Immune defenses of the body are powerless – in order to prevent a bacterial invasion, the body triggers a process which breaks down bone tissue
- > Implant sites are equally affected by biofilm – periimplantitis results in implant loss

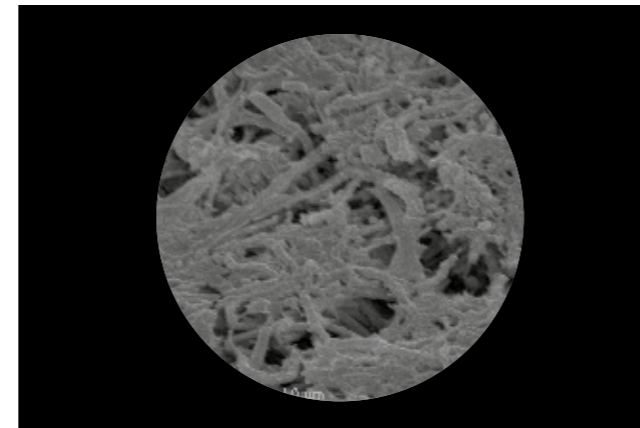


## SUBGINGIVAL PROPHYLAXIS → AGAINST BIOFILM

- > Up to 5 mm pocket depth – removal of biofilm with AIR-FLOW® handpiece and AIR-FLOW® Powder PERIO
- > Down to the bottom of periodontal pockets – removal of biofilm with PERIO-FLOW® handpiece including Perio nozzle and AIR-FLOW® Powder PERIO

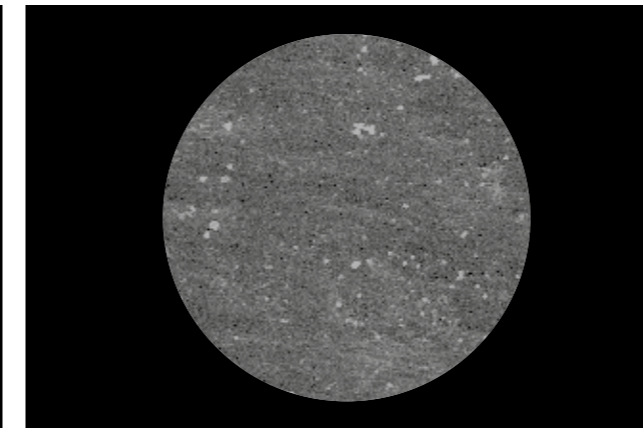
PERIO-FLOW® handpiece and nozzle for subgingival use  
3 horizontal nozzle outlets for air-powder mixture  
1 vertical nozzle outlet for water

## SCIENTIFIC EVIDENCE →

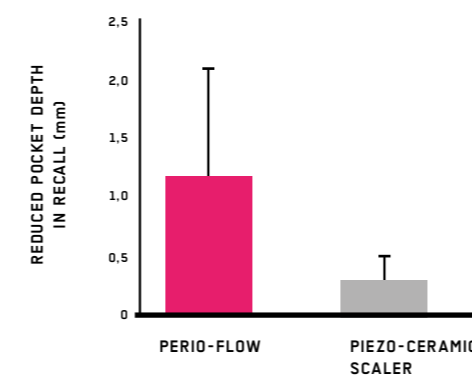


**BEFORE** → The white surfaces are parts of the biofilm located in a thick layer on the root surface

Photos by Prof. Dr. A. Mombelli, University of Geneva, Switzerland



**AFTER** → Following treatment with the Original AIR-FLOW® Method, the biofilm is removed, the root surface is clean and smooth down to the base of the periodontal pocket



**RESPONSE TO TREATMENT OF 200 PERIODONTAL POCKETS IN PATIENT RECALLS 3-6 MONTHS POST-TREATMENT**

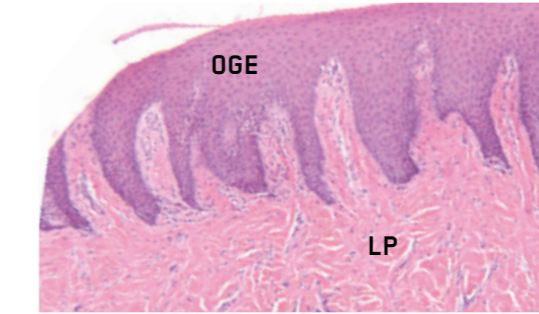
**REDUCTION OF POCKET DEPTH BY Ø 1.22 mm AFTER 4-6 WEEKS**

**PATIENT COMFORT FEEDBACK "FEEL GOOD" FACTOR OF 2.18\***

\* on a scale from 1 = very pleasant to 10 = unbearable

Clinical study on the subgingival application of the Original AIR-FLOW® method with PERIO-FLOW® handpiece and nozzle together with AIR-FLOW® Powder PERIO  
Prof. Dr. U. P. Saxer, Zurich, Switzerland

## SPARING THE EPITHELIUM →



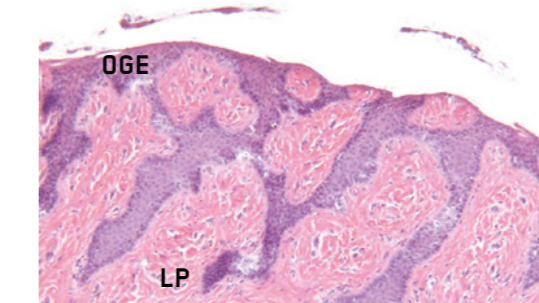
Negative control specimen → **BIOPSY SCORE 1**

**BIOPSY SCORES**

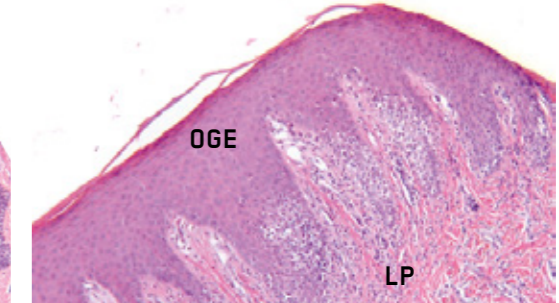
- 1 NO LESION
- 2 MINOR LESION
- 3 MEDIUM LESION
- 4 SEVERE LESION

Clinical study on the impact of the Original AIR-FLOW® Method (AIR-FLOW® S1) on the epithelium during treatment versus treatment with hand instrumentation

Petersilka G., Faggion Jr. C.M., Stratmann U., Gerss J., Ehmke B., Haerberlein I., Flemmig T.F. – Journal of Clinical Periodontology (Issue 4, 2008)



Epithelium following treatment with hand instrumentation → **BIOPSY SCORE 4**

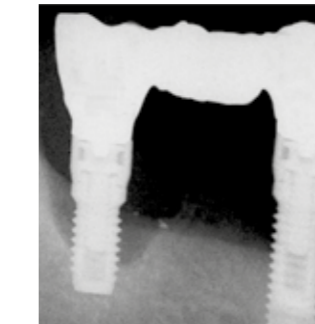


Epithelium following treatment with the Original AIR-FLOW® Method → **BIOPSY SCORE 1**

OGE = ORAL GINGIVAL EPITHELIUM  
LP = LAMINA PROPRIA

## IMPLANTS →

### A POOR INVESTMENT WITHOUT PROPHYLAXIS



Implant, loose due to withdrawal of bone tissue

- > Periimplantitis is the periodontitis of implant patients
- > Biofilm adheres to the titanium implant, thus causing periimplant infections, withdrawal of supporting bone, and eventually loss of implant
- > Regular prophylaxis with the Original AIR-FLOW® method is proven to prevent periimplantitis\* and its costly aftermath

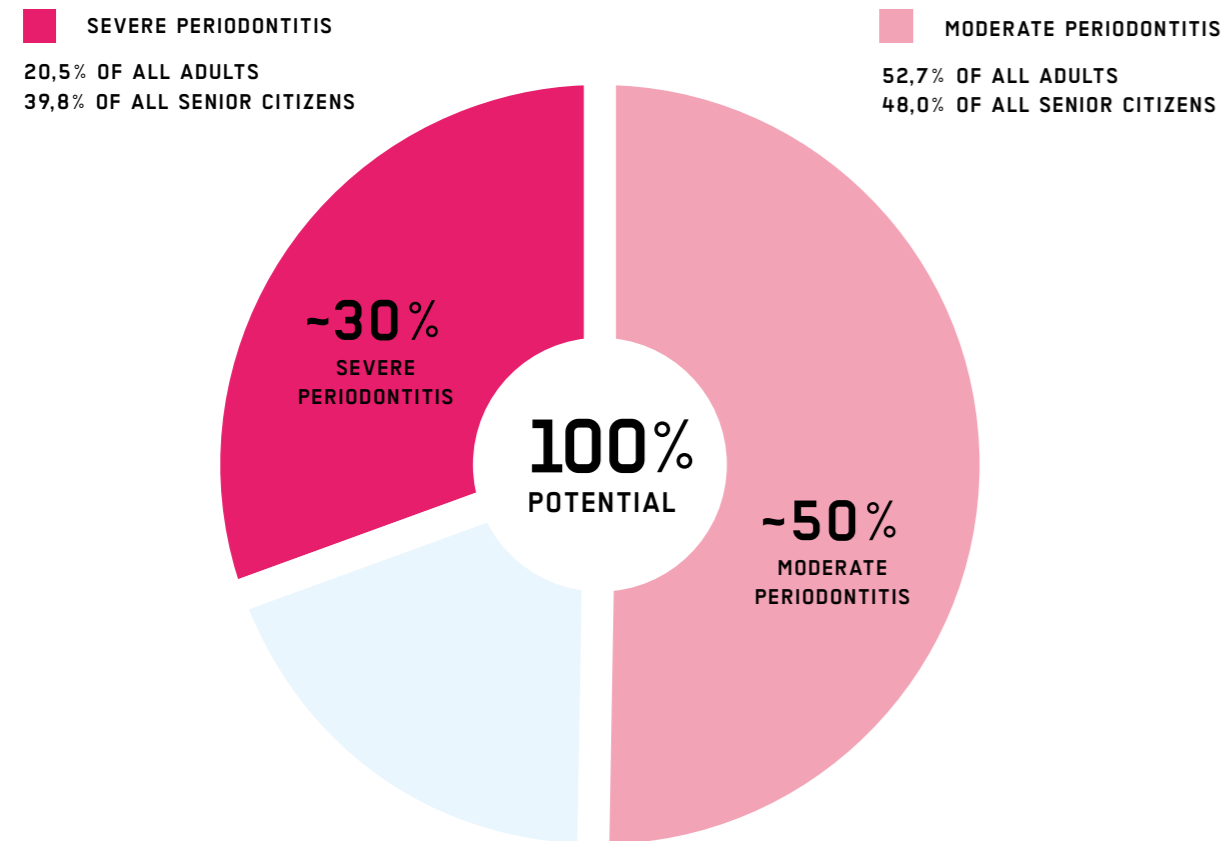
**THE IMPLANT PATIENT IS AND CONTINUES TO BE A PATIENT**

\* The use of the Original AIR-FLOW® method allowed to restore the biocompatibility of titanium implant surfaces already contaminated by plaque (...). The powder's optimum abrasivity for titanium surfaces caused the removal of biofilm (99.9 percent) and of the uppermost titanium oxide layer

Schwarz F., Ferrari D., Popovski K., Hartig B., Becker J. – Journal of Biomedical Materials Research Part B (July 2008)

X-ray photography by Prof. Dr. Stefan Renvert, University of Kristianstad, Sweden

## PERIODONTITIS AND PERIIMPLANTITIS → 100% POTENTIAL FOR SUB- AND SUPRAGINGIVAL PROPHYLAXIS



> German Oral Health Survey 2006  
Increase since 1997: adults + 29.9 percentage points, senior citizens + 23.7 percentage points

## PERIODONTITIS AND PERIIMPLANTITIS → INCREASED RISK FACTOR

DIABETES 2-11 X	STROKE 2 X
ARTHEROSCLEROSIS 2 X	PREMATURE BIRTH 4-8 TIMES (HIGHER THAN WHEN HEALTHY)
OSTEOPOROSIS 2-4 X	CHRONIC DISEASE OF THE BRONCHIAL PASSAGES 2-4 X

> according to Hetz / Hendriks 2004

# ORIGINAL AIR-FLOW® METHOD → SUBGINGIVAL

## PERIO-FLOW® HANDPIECE →

- > Innovative design, specially developed for use in deep periodontal pockets
- > Ergonomic handpiece for the new AIR-FLOW® Powder PERIO
- > Sterilizable at 134° C

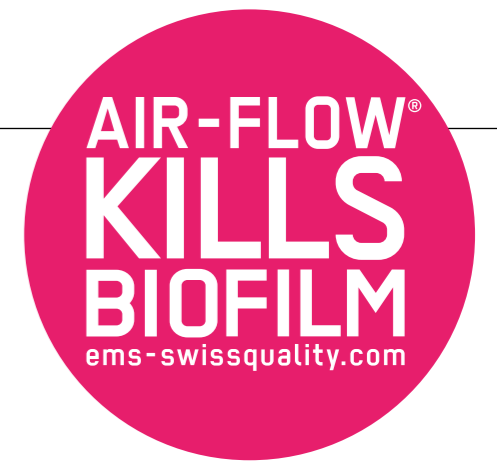
## PERIO-FLOW® NOZZLE →

- > Optimum gentle turbulence in subgingival area prevents soft tissue emphysema via three horizontal nozzle outlets for air-powder mixture, and one vertical nozzle outlet for water
- > Patented single-use nozzle
- > Quick connection onto the new PERIO-FLOW® handpiece

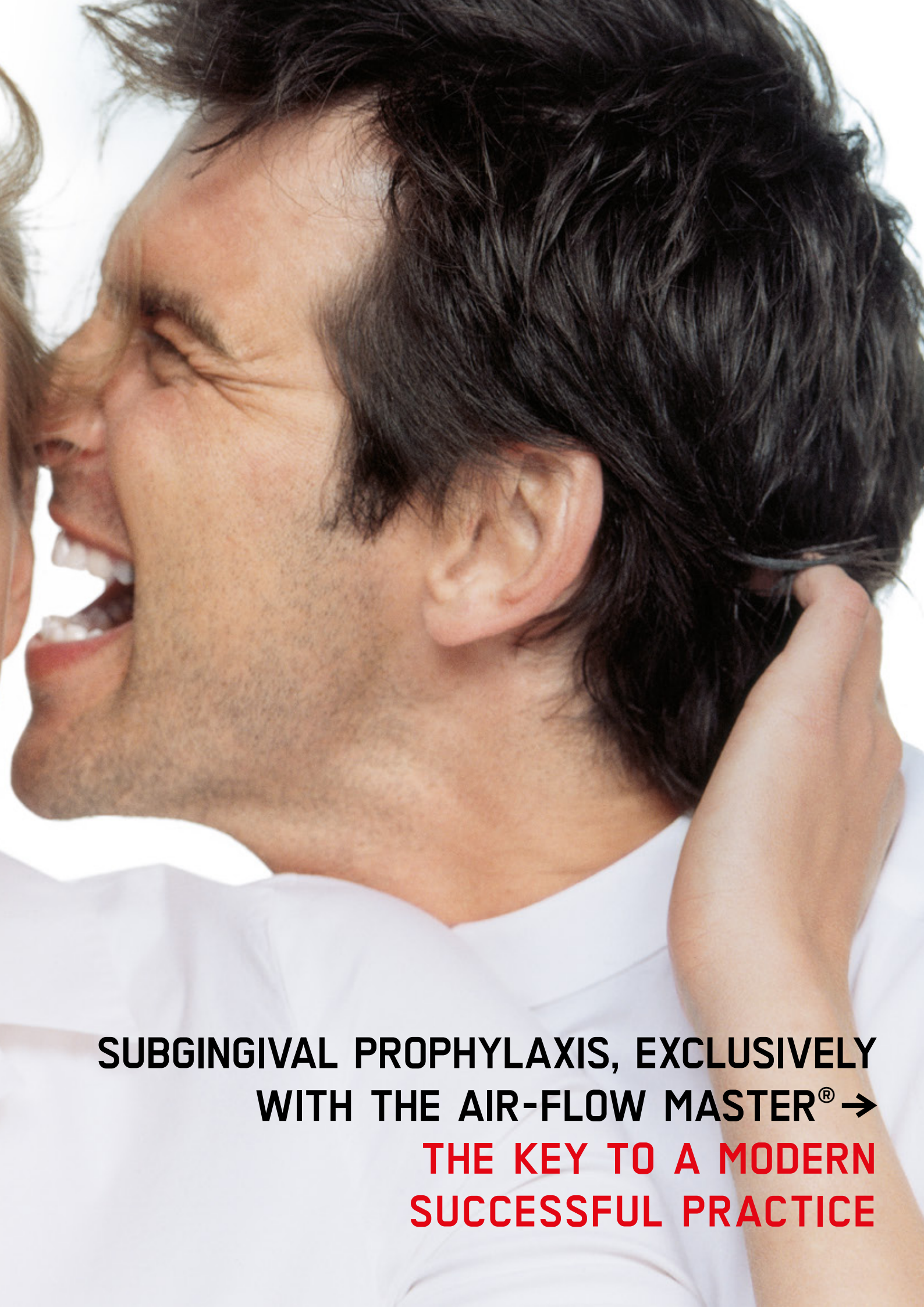
## AIR-FLOW® POWDER PERIO →

- > Grain size ~ 25 µm (d50)
- > Ultrafine grain matched to the new PERIO-FLOW® handpiece, with PERIO-FLOW® nozzle
- > Does not abrade dentin

## BEYOND THE BOUNDARIES OF CONVENTIONAL PROPHYLAXIS







**SUBGINGIVAL PROPHYLAXIS, EXCLUSIVELY  
WITH THE AIR-FLOW MASTER® →  
THE KEY TO A MODERN  
SUCCESSFUL PRACTICE**

# NO 1, TODAY AND TOMORROW THE ORIGINAL AIR-FLOW® METHOD → WIDELY KNOWN AND RECOGNIZED

## FIGHTS STAINING AND MICROBIAL TOOTH DEPOSITS

- > Bacteria and micro-organisms in plaque are responsible for the spread of gingivitis, periodontitis and caries. This is countered by the removal of microbial tooth deposits and the effect of fluoride action



**PREVENTS GINGIVITIS, PERIODONTITIS AND CARIES**

Photos: Dr. M. Roubach

## WHEN SEALING FISSURES

- > Cleaning the fissures before sealing improves the adherence of the sealing material and reduces the risk of caries

**MINIMIZES THE RISK OF CARIES**

## IN CONSERVATIVE DENTISTRY

- > Cleaning the surface to prepare for enamel etching improves the adherence of composite, ceramic inlays and veneers

**EXTENDS THE LIFE AND OPTIMIZES THE QUALITY OF SYNTHETIC AND CERAMIC RESTORATIONS**

## IN PROSTHETICS

- > Cleaning healthy teeth for the color adjustment of bridges, crowns, inlays and onlays, etc.

**FACILITATES COLOR DETERMINATION**

## IN ORTHODONTICS

- > Preparing the surface prior to bonding, cleaning of cemented bands and bonded brackets, removing adhesive residue



**REDUCES TREATMENT RISKS**

Photo: Dr. R. Kalla

## IN ESTHETIC DENTISTRY

- > Cleaning the teeth before bleaching helps determine the exact natural color of the teeth
- > Preparing the tooth surface guarantees the optimum efficacy of the bleaching agent

**OPTIMIZES BLEACHING PERFORMANCE**

# ALWAYS OPTIMAL → ORIGINAL AIR-FLOW® POWDER

**NEW**



**AIR-FLOW® POWDER SOFT →**  
Glycine-based, grain size ~ 65µm (d50),  
does not abrade enamel, particularly gentle



**AIR-FLOW® POWDER CLASSIC →**  
Sodium bicarbonate, grain size ~ 65µm (d50),  
Minimally abrasive, with anti-inflammatory action

# PROPHYLAXIS WITHOUT LIMITS →

EASY ACCESS AND UNIFORM TURBULENCE  
OF AIR-POWDER MIXTURE AND OF WATER →  
**PREVENTS SOFT TISSUE EMPHYSEMA**

GENTLE APPLICATION OF BIOKINETIC ENERGY  
GENERATED WITH THE ORIGINAL  
AIR-FLOW® METHOD → **NO SCRATCHING  
OF THE TOOTH SURFACE**

EFFECTIVE REMOVAL OF BIOFILM DOWN TO  
THE POCKET BOTTOM → **WITHOUT DAMAGING  
THE CEMENTUM**

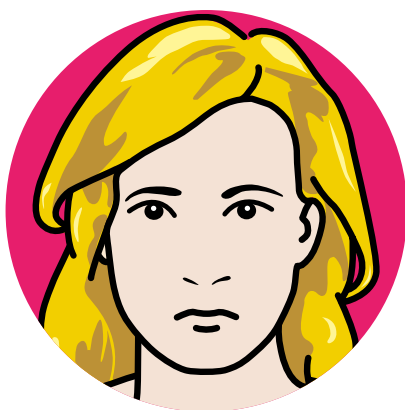
SUSTAINED REDUCTION IN BACTERIA → **NO TOOTH  
OR IMPLANT LOSS DUE TO PERIODONTITIS OR  
PERIIMPLANTITIS**



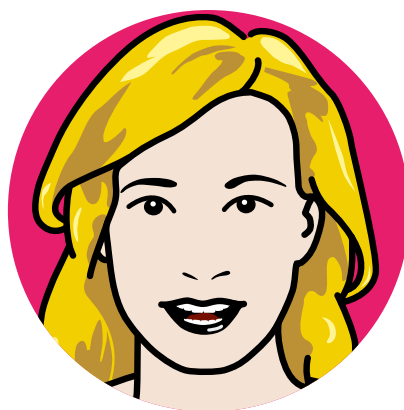
EFFECTIVE PERIO POLISHING → **WITHOUT  
DAMAGE TO THE EPITHELIUM OR CONNECTIVE  
TISSUE**

FAST, RELIABLE, STRESS-FREE TREATMENT  
WITHOUT UNPLEASANT CURETTES OR NOISE →  
**FOR MAXIMUM PATIENT COMFORT**

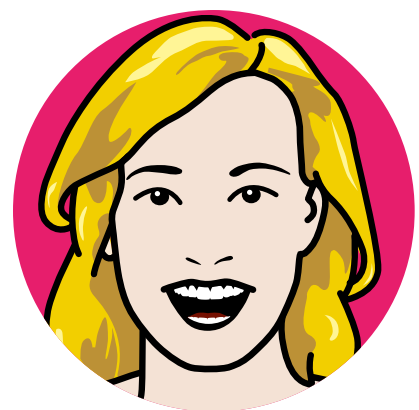
**3 STEPS TO PERFECT  
PROPHYLAXIS →**



**1**  
DIAGNOSIS AND  
TREATMENT PLAN



**2**  
INITIAL TREATMENT



**3**  
RECALL

**DEEP DOWN, SATISFACTION SHOWS**



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