

# White Paper on Prevention and Management of Periodontal Diseases for Oral Health and General Health

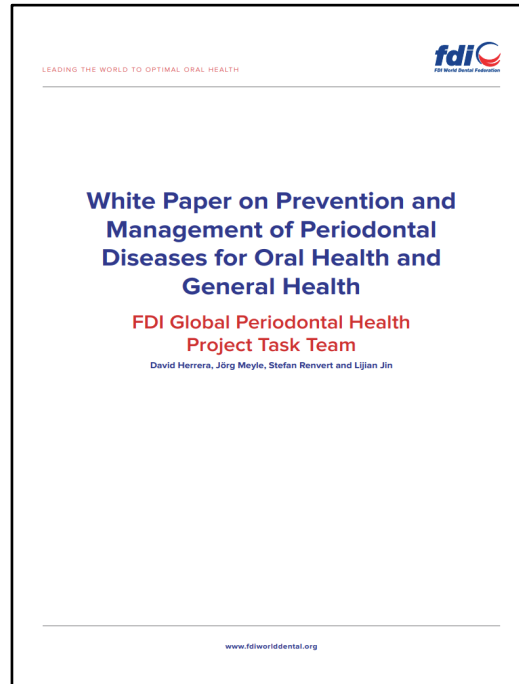
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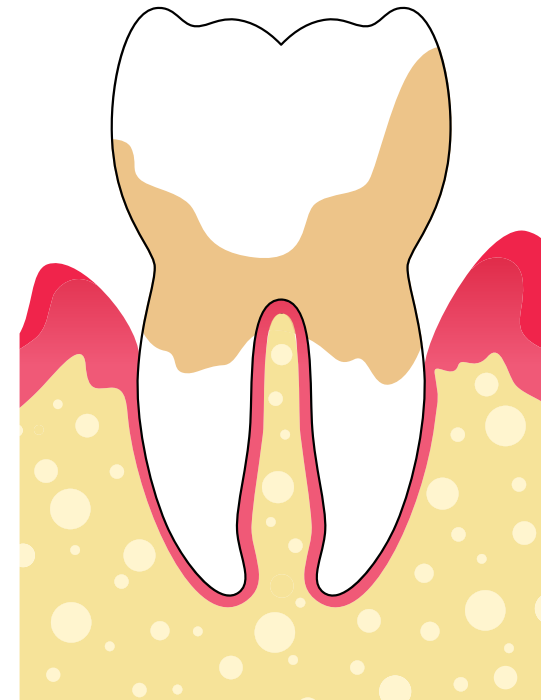
The White Paper can be accessed [here](#)



The FDI Global Periodontal Health Project webpage can be accessed [here](#)

## Periodontal (gum) diseases: one of the major global health burdens.

- Severe periodontitis: the leading cause of multiple tooth loss and edentulism in adults.
- Periodontitis: a public health problem strongly associated with systemic diseases.
- A **silent epidemic**: high prevalence and low public awareness.
- Having huge socio-economic impacts with very high costs and productivity loss.

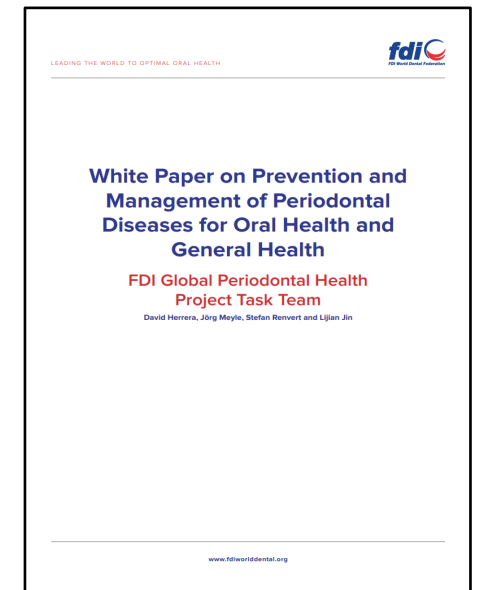


## **The White Paper was published as part of FDI'S Global Periodontal Health Project.**

- To be used by the entire dental team.

## **You are encouraged to:**

- Engage with community organizations and health bodies; and
- Advocate for periodontal health to be integrated into policies and programmes for optimal oral and general health.

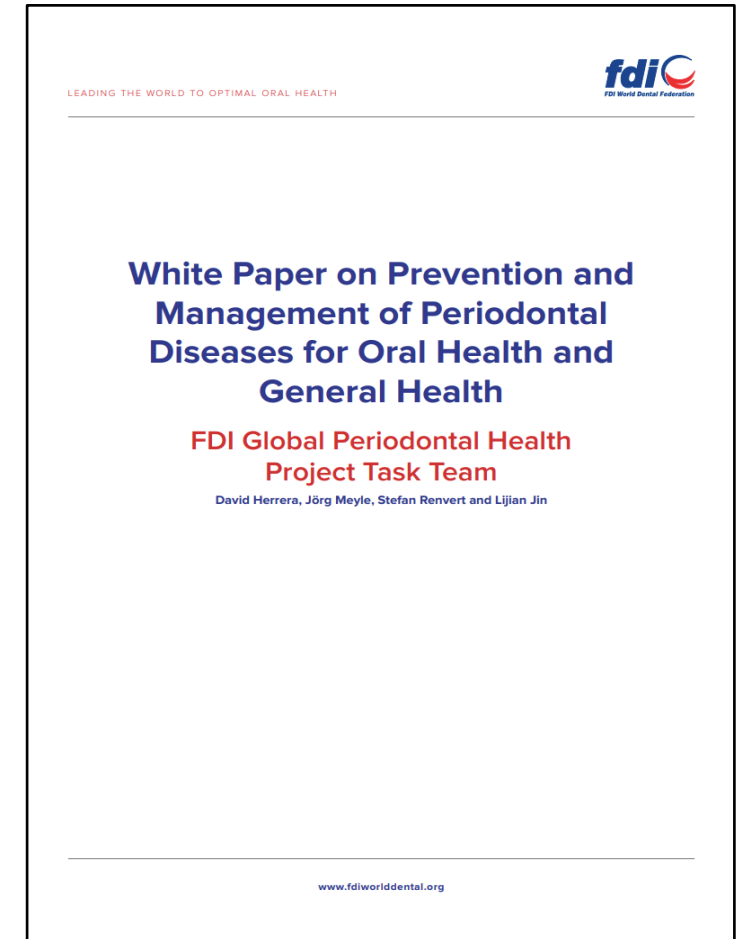


## Section 1

Periodontal diseases: Definition, classification and diagnosis

## Section 2

Aetiology and pathogenesis of periodontal diseases



## Why are periodontal diseases important?

### Section 3

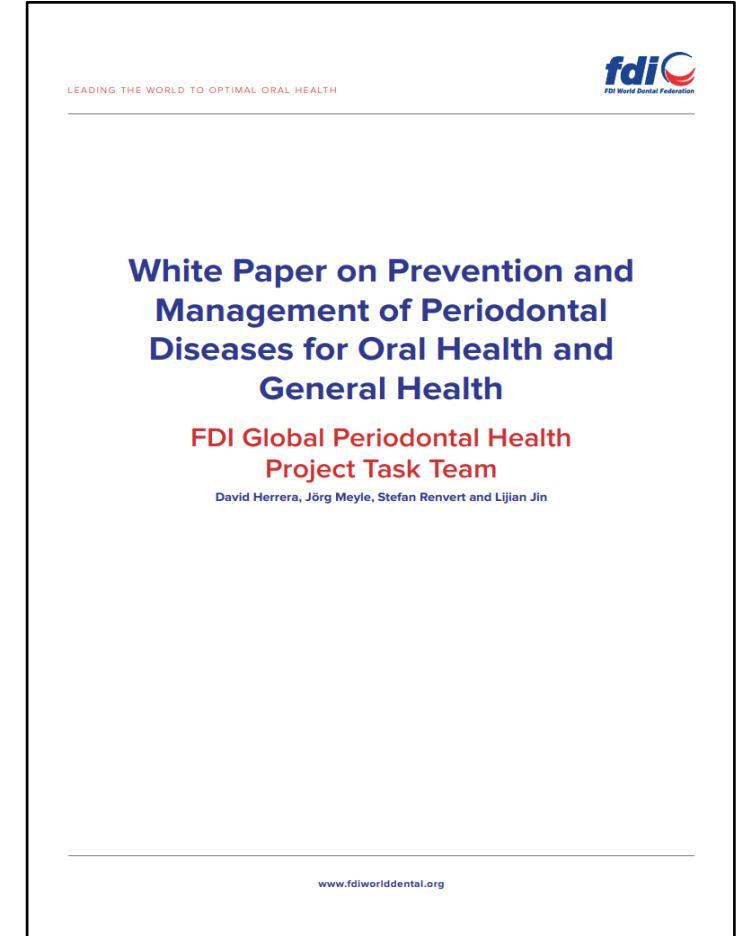
Periodontal diseases as prevalent conditions in humans: epidemiology and global burden

### Section 4

Periodontitis as an inflammatory disease sharing risk factors with other chronic noncommunicable diseases (NCDs)

### Section 5

Consequences and impacts of periodontitis



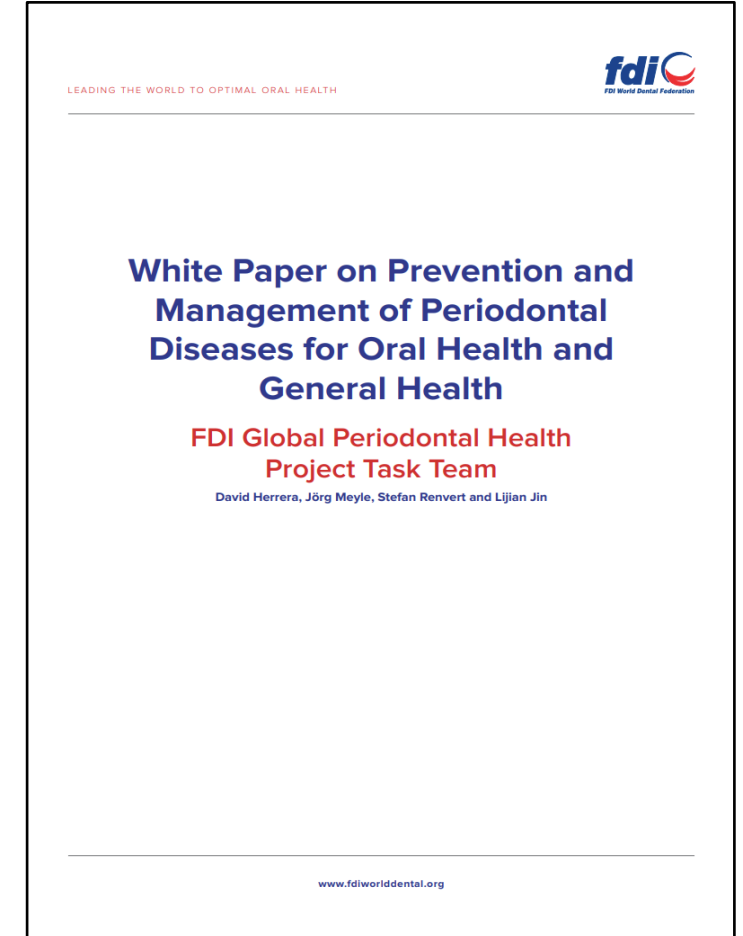
## Are periodontal diseases preventable and treatable?

### Section 6

Prevention of periodontal diseases

### Section 7

Treatment of periodontal diseases



## What are the current problems/challenges and recommended actions?

### Section 8

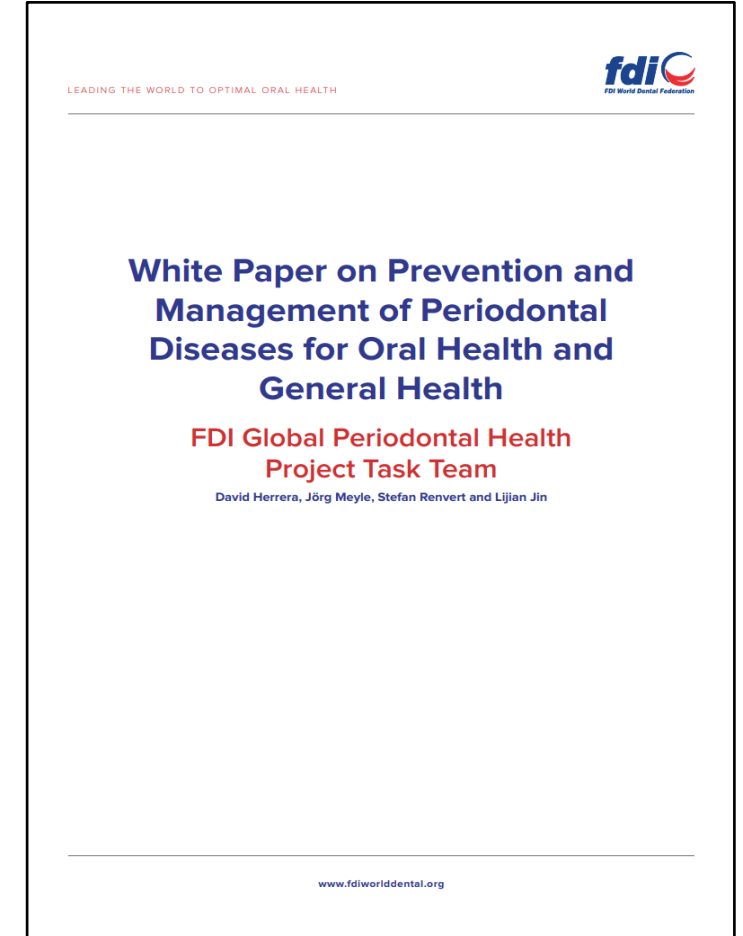
Current problems and major challenges of periodontal care

### Section 9

Recommendations, solutions, calls for action and perspectives

### Section 10

Action plan





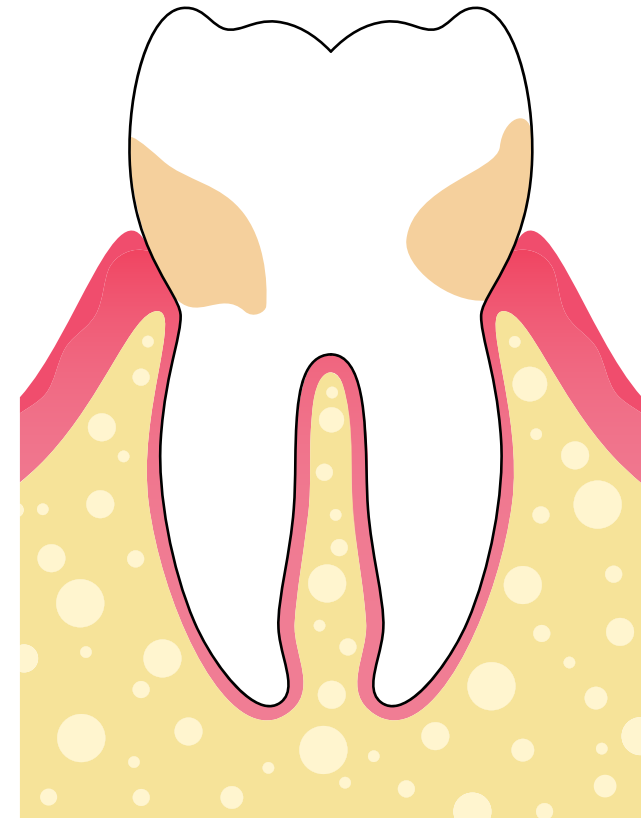
## Section 1

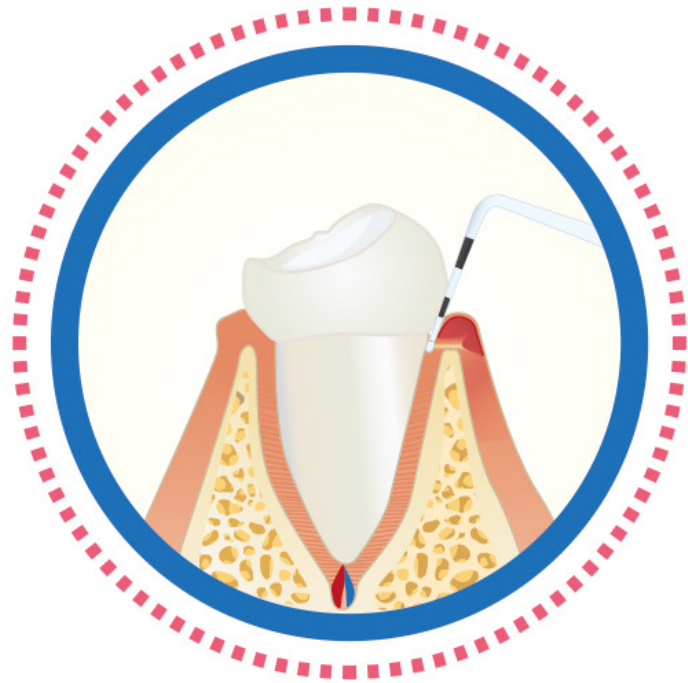
Periodontal diseases: Definition,  
classification and diagnosis

- Periodontal health: absence of clinically detectable inflammation.
- Gingivitis: commonly painless, an inflammatory condition characterized by redness, oedema, absence of periodontal attachment loss and alveolar bone loss.
  - Two broad categories:
    - Dental biofilm-induced gingivitis; and
    - Non-dental biofilm-induced gingival disease (not resolved following plaque removal; may be a manifestation of a systemic or localized condition).
  - If gingivitis is not correctly treated and well-controlled, it can lead to periodontitis.



- **Periodontitis:** a profound inflammatory disease with notable destruction of tooth-supporting tissues (gingiva, periodontal ligament and alveolar bone).
  - It is the major cause of tooth loss/edentulism in adults.
  - Affects general health and closely links to systemic diseases/disorders, such as:
    - diabetes
    - cardiovascular disease
    - adverse pregnancy outcomes





STAGE I



STAGE II

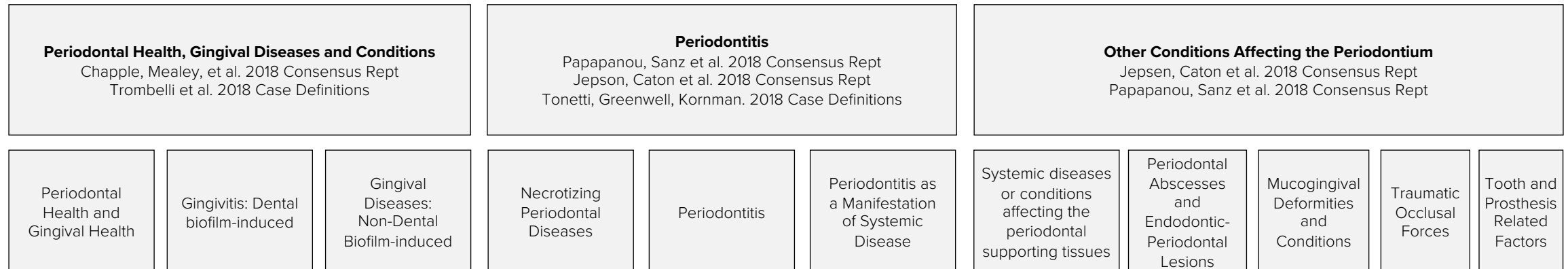


STAGES III-IV

- These educational slides are based on the classification system of 2017 World Workshop, superseding the guidance from the one in 1999, which underpins the FDI White Paper. The landmark World Workshop was led by the American Academy of Periodontology (AAP) and European Federation of Periodontology (EFP) in Chicago, and the new classification system was published in 2018.
- **The 2018 classification:**
  - Provides a new definition of clinical periodontal health
  - Introduces a multi-dimensional staging and grading system for periodontitis
  - Incorporates an inaugural classification of peri-implant diseases.

## Classification of Periodontal and Peri-Implant Diseases and Conditions 2017

### Periodontal Diseases and Conditions



### Peri-implant diseases and condition



- The diagnosis of periodontal diseases:
  - Medical history
  - Dental history, including the chief complaint(s)
  - Social history (tobacco use, alcohol consumption, diet, etc)
  - Extra-oral examination
  - Intra-oral examination:
    - Teeth surfaces, caries lesions, dental plaque (biofilm), mobility, occlusal aspects and pulpal status
    - Oral mucosal status





- **Periodontal examination:**
  - Screening examination
  - Plaque and calculus (presence and distribution)
  - Periodontal and peri-implant soft tissue assessment
  - Measurement of bleeding on probing, probing depth and gingival recession (or enlargement) at six sites per tooth for all present teeth
  - Furcation lesions, tooth mobility and mucogingival aspects
  - Radiographic examination
- Following a diagnosis of periodontitis, staging and grading clarify the extent, severity and complexity of the patient's condition, rate of disease progression, predicted response to standard therapies and potential impacts on systemic health.



SECTION 1 PERIODONTAL DISEASES: DEFINITION, CLASSIFICATION AND DIAGNOSIS



Periodontitis Stage		Stage 1	Stage 2	Stage 3	Stage 4
Severity	Interdental CAL at site of greatest loss	1 to 2mm	3 to 4mm	≥5mm	≥5mm
	Radiographic bone loss	Coronal third (<15%)	Coronal third (15% to 35%)	Extending to middle or apical third of the root	Extending to middle or apical third of the root
	Tooth Loss	No tooth loss due to periodontitis		Tooth loss due to periodontitis of ≤4 teeth	Tooth loss due to periodontitis of ≥5 teeth
Complexity	Local	Maximum probing depth ≤4mm Mostly horizontal bone loss	Maximum probing depth ≤5mm Mostly horizontal bone loss	In addition to stage 2 complexity: Probing depth ≥6mm Vertical bone loss ≥3mm Furcation involvement Class 2 and 3 Moderate ridge defect	In addition to Stage 3 complexity: Need for complex rehabilitation due to: Masticatory dysfunction Secondary occlusal trauma (tooth mobility degree ≥2) Severe ridge defect Bite collapse, drifting, flaring Less than 20 remaining teeth (10 opposing pairs)
Extent and Distribution	Add to stage as descriptor	For each stage, describe extent as localised (<30% of teeth involved), generalised, or molar/incisor pattern			

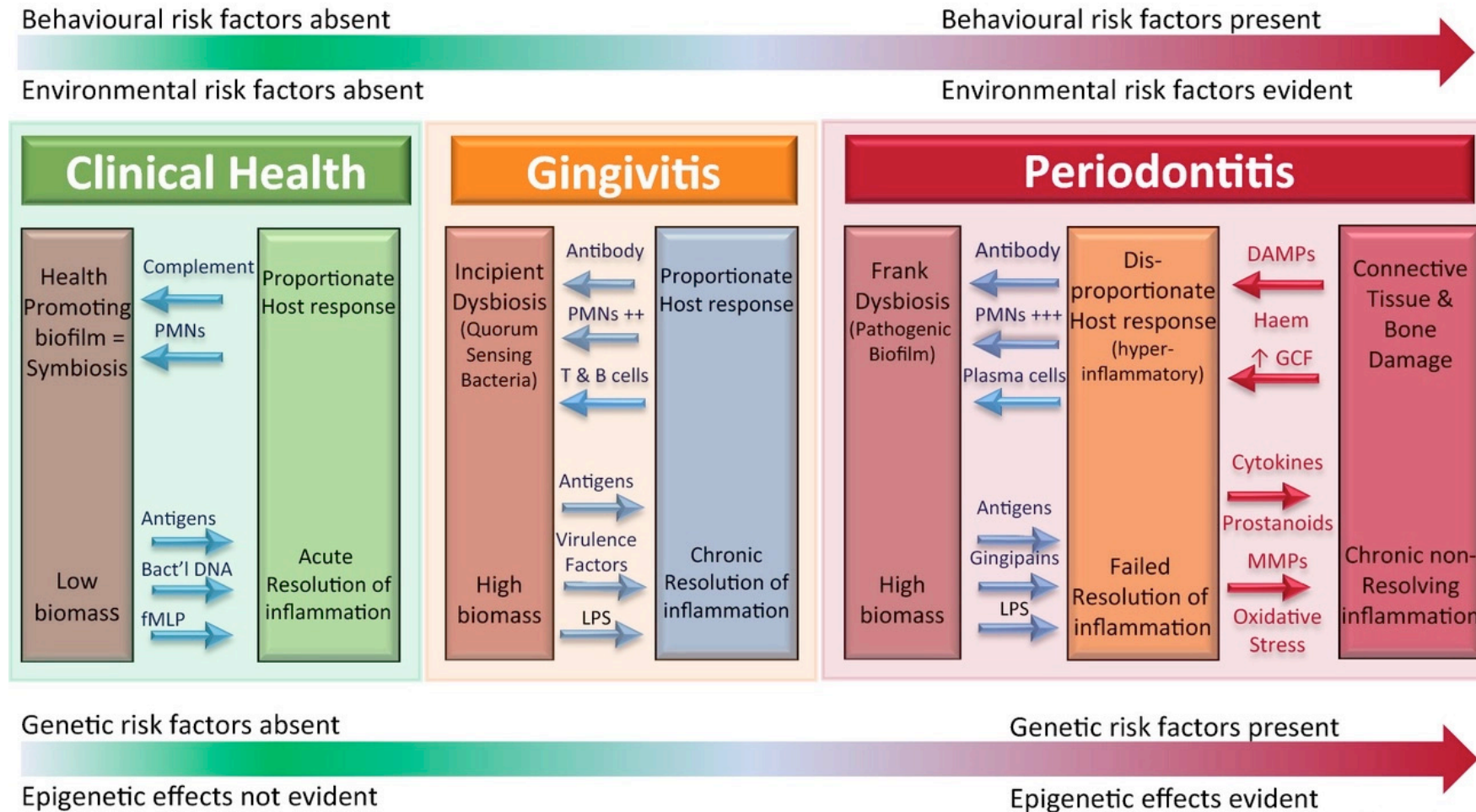
SECTION 1 PERIODONTAL DISEASES: DEFINITION, CLASSIFICATION AND DIAGNOSIS



Periodontitis Grade		Grade A: Slow rate of progression	Grade B: Moderate rate of progression	Grade C: Rapid rate of progression	
Primary criteria	Direct evidence of progression	Longitudinal data (radiographic bone loss or CAL)	Evidence of no loss over 5 years	≤2mm over 5 years	≥2mm over 5 years
	Indirect evidence of progression	% bone loss/age	≤0.25	0.25 to 1.0	≥1.0
		Case phenotype	Heavy biofilm deposits with low levels of destruction	Destruction commensurate with biofilm deposits	Destruction exceeds expectation given biofilm deposits; specific clinical patterns suggestive of periods of rapid progression and/or early onset disease (e.g. molar/incisor pattern; lack of expected response to standard bacterial control therapies)
Grade modifiers	Risk factors	Smoking	Non-smoker	Smoker ≤10 cigarettes a day	Smoker ≥10 cigarettes a day
		Diabetes	Normoglycemic / no diagnosis of diabetes	HbA1c ≤7.0% in patients with diabetes	HbA1c ≥7.0% in patients with diabetes

## Section 2

# Aetiology and pathogenesis of periodontal diseases



Chapple 2015

- Specific bacterial species in the subgingival biofilms like *Porphyromonas gingivalis* are the primary aetiological factor in periodontitis, via inducing dysbiotic biofilms
- However, the dysregulated host response plays an important role in the pathogenesis of periodontal diseases



Hajishengallis et al., *Cell Host Microbe* 2011; 10:497-506. Hajishengallis et al., *Nat Rev Microbiol* 2012; 10:717-725. Maekawa et al., *Cell Host Microbe* 2014; 15:768-778.

Hajishengallis, *Nat Rev Immunol* 2015; 15:30-44. Roberts & Darveau, *Periodontol* 2000 2015; 69:18-27. Meyle & Chapple, *Periodontol* 2000 2015; 69:7-17.

Marsh & Zaura, *J Clin Periodontol* 2017; 44 (Suppl 18):S12-S22. Li et al., *J Clin Periodontol* 2018; 45:1211-1221. Wang et al., *Antimicrob Agents Chemother* 2020; 64:e02529-19.



- Various risk factors can influence and modify the onset and development of periodontal diseases.
- The dental team can greatly contribute to controlling the modifiable risk factors:
  - Tobacco use (cigarettes and other forms such as snuff; e-cigarettes; water pipe smoking; etc.)
  - Excessive alcohol consumption
  - Unhealthy diet
  - Lack of physical exercise
  - Obesity
  - Poor glycaemic control
  - Psychological stress
  - Various local factors (e.g., overhanging or poorly contoured restorations and occlusal trauma)



- **Non-modifiable** risk factors include sex, age and genetic profile.



# WHY ARE PERIODONTAL DISEASES IMPORTANT?

## Section 3

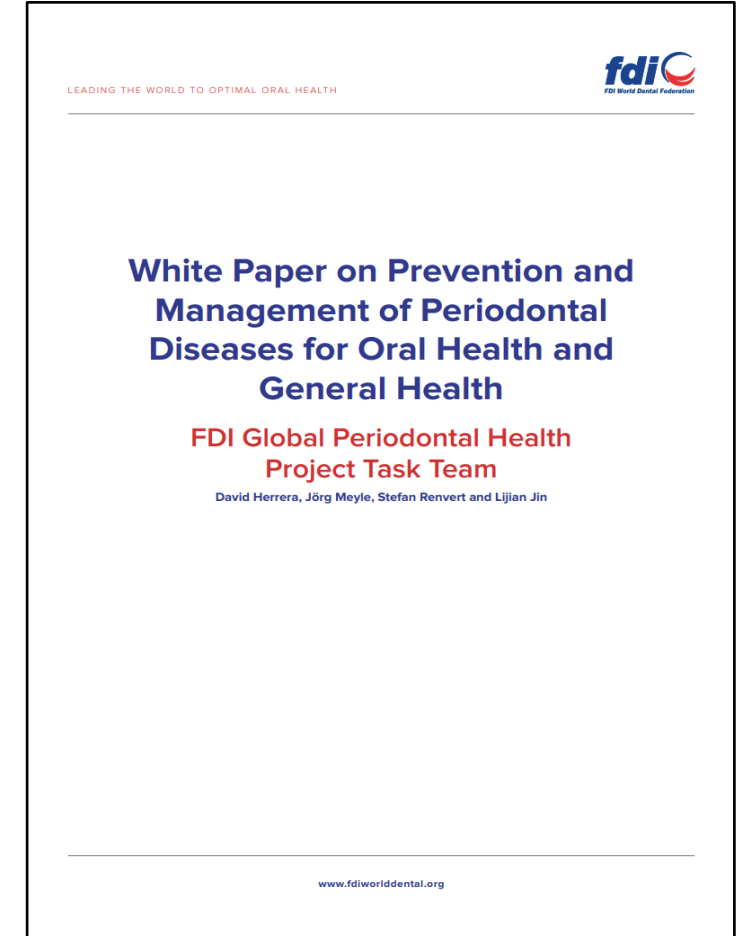
Periodontal diseases as prevalent conditions in humans: epidemiology and global burden

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Periodontitis as an inflammatory disease sharing risk factors with other chronic noncommunicable diseases (NCDs)

## Section 5

Consequences and impacts of periodontitis

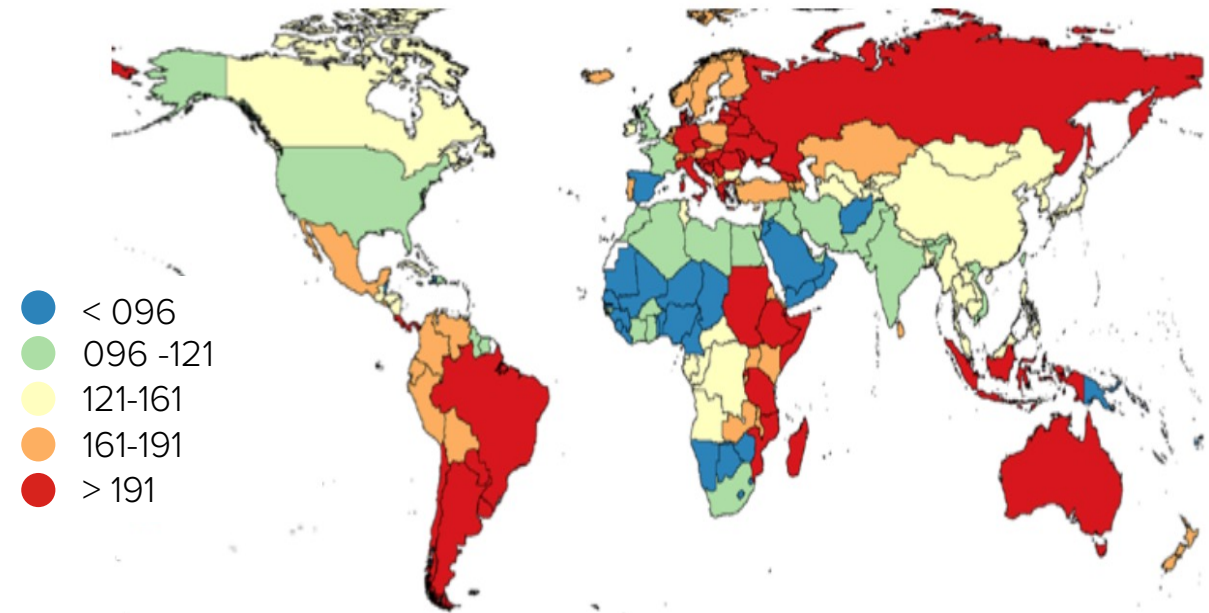




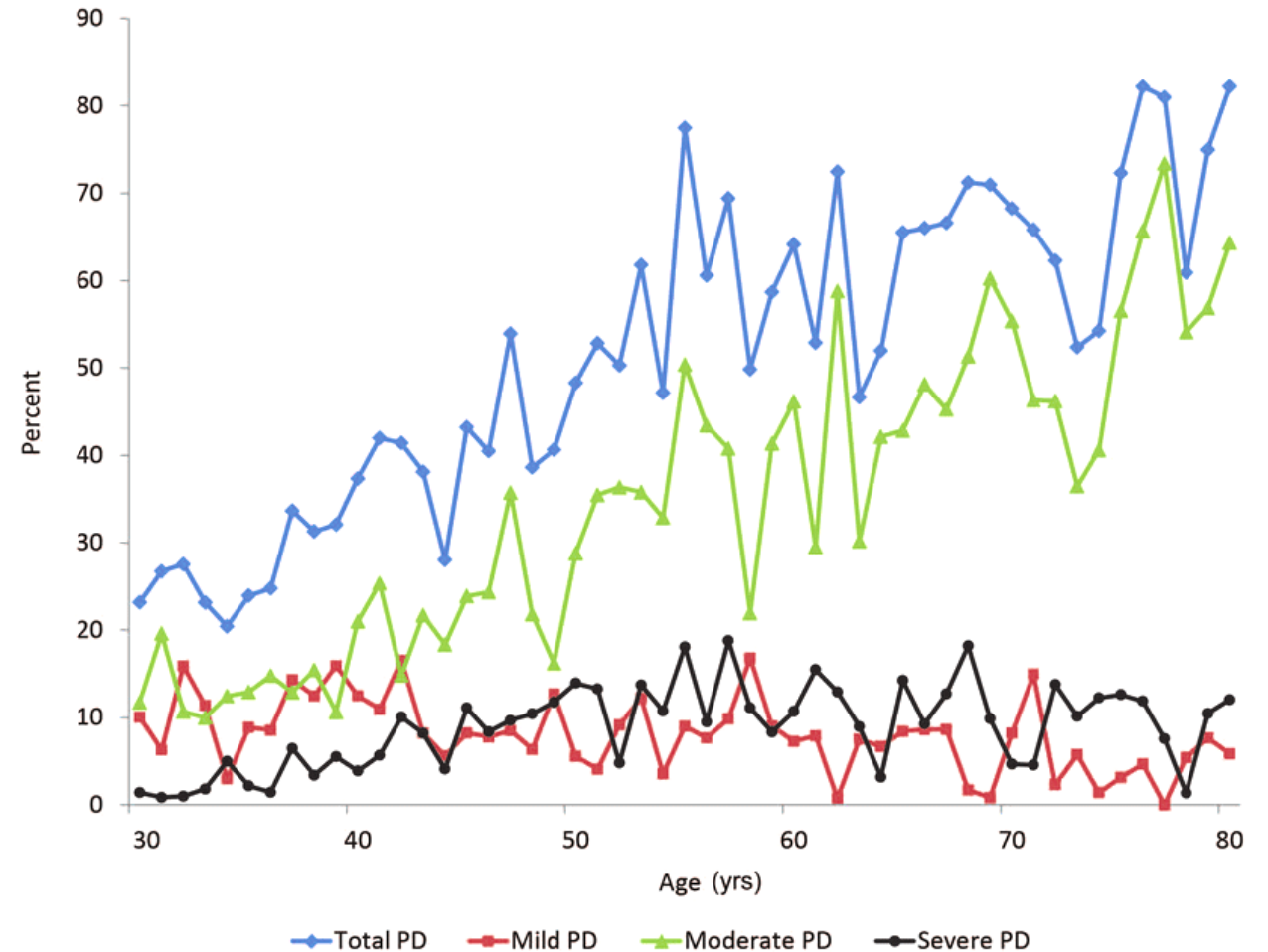
## Section 3

Periodontal diseases as prevalent conditions in humans: epidemiology and global burden

- The first and follow-up Global Burden of Disease (GBD) studies show that:
  - Severe periodontitis is the 6<sup>th</sup> most prevalent condition among all diseases investigated
  - Affecting 11.2% of the global population (about 750 million people)
  - The global burden of periodontal diseases increased by 57.3% from 1990 to 2010
  - The prevalence increases with age
  - Severe periodontitis has significant socio-economic impacts.



- Periodontitis, from mild (stage I) to severe (stages III and IV), may affect up to 50% of the adult population



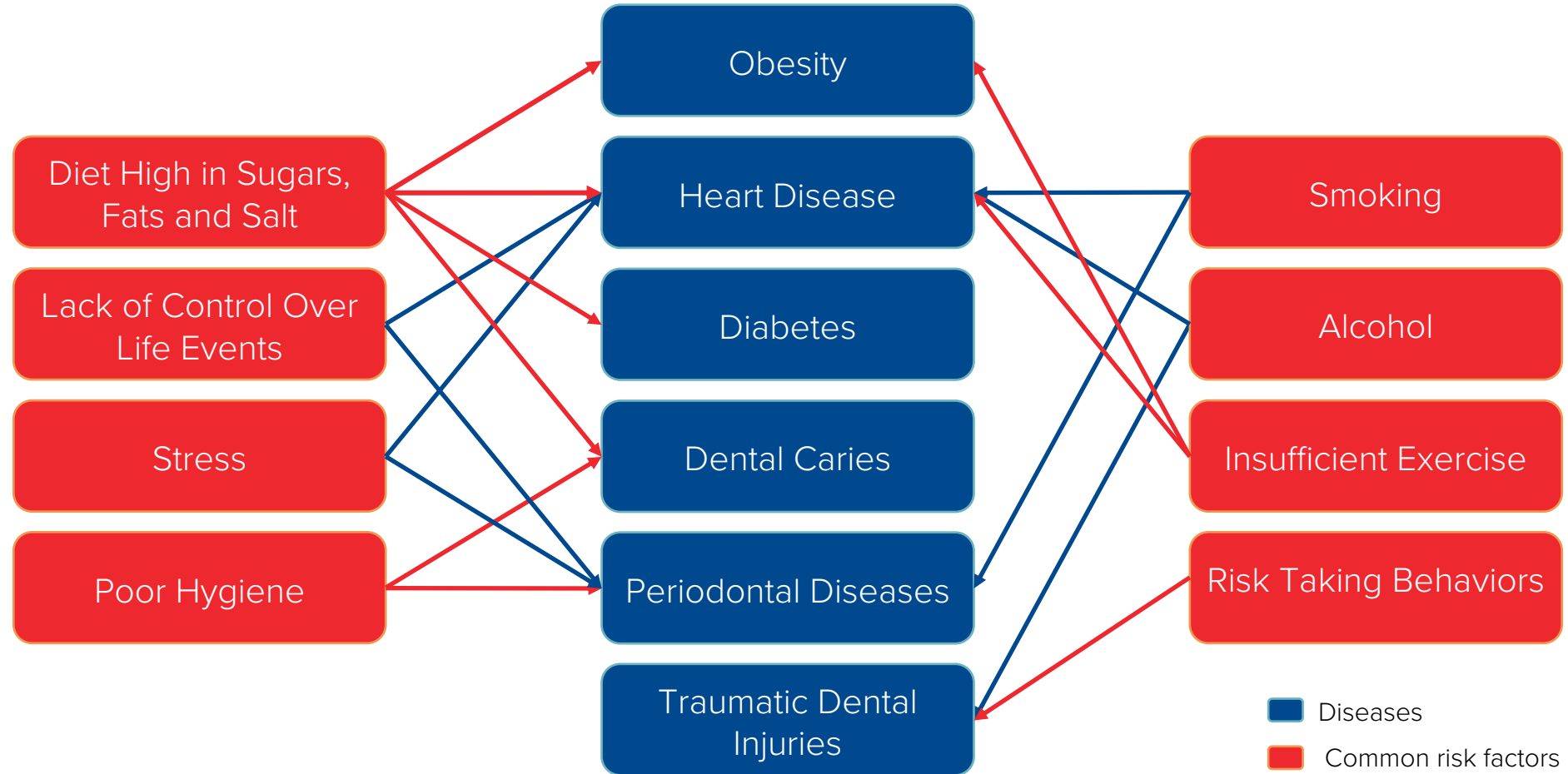
**Figure.** Prevalence by age. (a) The percentage prevalence of different cut-off values (3 mm, 4 mm, 5 mm, 6 mm, 7 mm) for AL by age. (b) The percentage prevalence of different cut-off values (3 mm, 4 mm, 5 mm, 6 mm, 7 mm) for PD by age. (c) The percentage of total periodontitis, severe periodontitis, moderate periodontitis, and mild periodontitis by age.

## Section 4

Periodontitis as an inflammatory disease  
sharing risk factors with other chronic  
noncommunicable diseases (NCDs)

- Periodontitis is closely linked with other systemic diseases/conditions or comorbidities, and different elements are crucial for such connections:
  - Periodontitis is a serious infectious/inflammatory disease: there are biofilms harbouring millions of microbes between the tooth and ulcerated epithelial surfaces (8-20 cm<sup>2</sup> in periodontitis). Bacteria from these subgingival biofilms may enter the blood circulation after tooth-brushing or eating.
  - Bacteraemia, together with bacterial toxins and inflammatory mediators from the periodontal area, can increase significantly the systemic level of inflammation.
  - Periodontitis shares common risk factors with chronic noncommunicable diseases (NCDs) like diabetes and cardiovascular disease.

SECTION 4 PERIODONTITIS AS AN INFLAMMATORY DISEASE SHARING RISK FACTORS WITH OTHER CHRONIC NONCOMMUNICABLE DISEASES (NCDs)



## Section 5

# Consequences and impacts of periodontitis

## Consequences to mouth:

- Redness of the gums
- Gingival bleeding
- Halitosis/bad breath
- Gingival recession
- Tooth displacement
- Increased inter-dental spaces
- Tooth mobility
- Tooth loss
- Edentulism



<https://www.efp.org/for-patients/>



## Consequences to daily life:

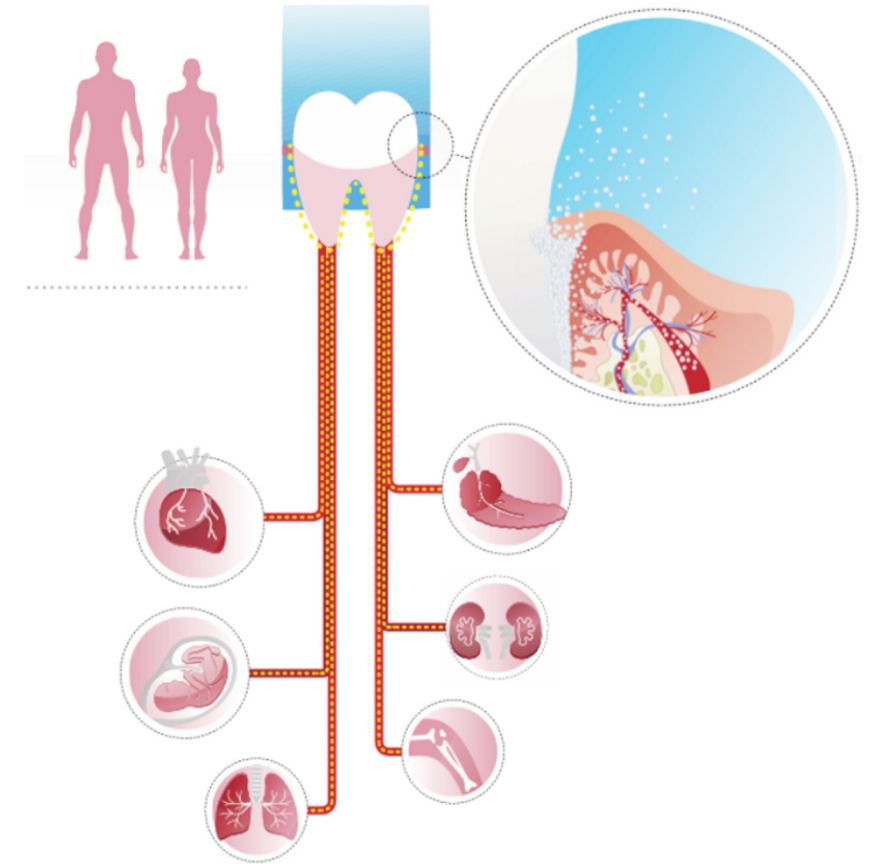
- Aesthetic impairment
- Chewing impairment due to tooth loss, tooth mobility, and/or inflammation
- Lower oral health-related quality of life (OHRQoL)
- Negative quality of life (QoL) consequences (i.e., anxiety, feeling ashamed or demonstrating vulnerability)
- Low self-esteem



<https://www.efp.org/for-patients/>

## Consequences to systemic health:

- Diabetes
- Cardiovascular disease
- Pregnancy adverse outcomes
- Aspiration pneumonia
- Alzheimer disease
- Inflammatory bowel disease
- Rheumatoid arthritis
- Colorectal cancer
- Via bacteraemia and systemic inflammation, as well as shared risk factors and pathological traits



# ARE PERIODONTAL DISEASES PREVENTABLE AND TREATABLE?

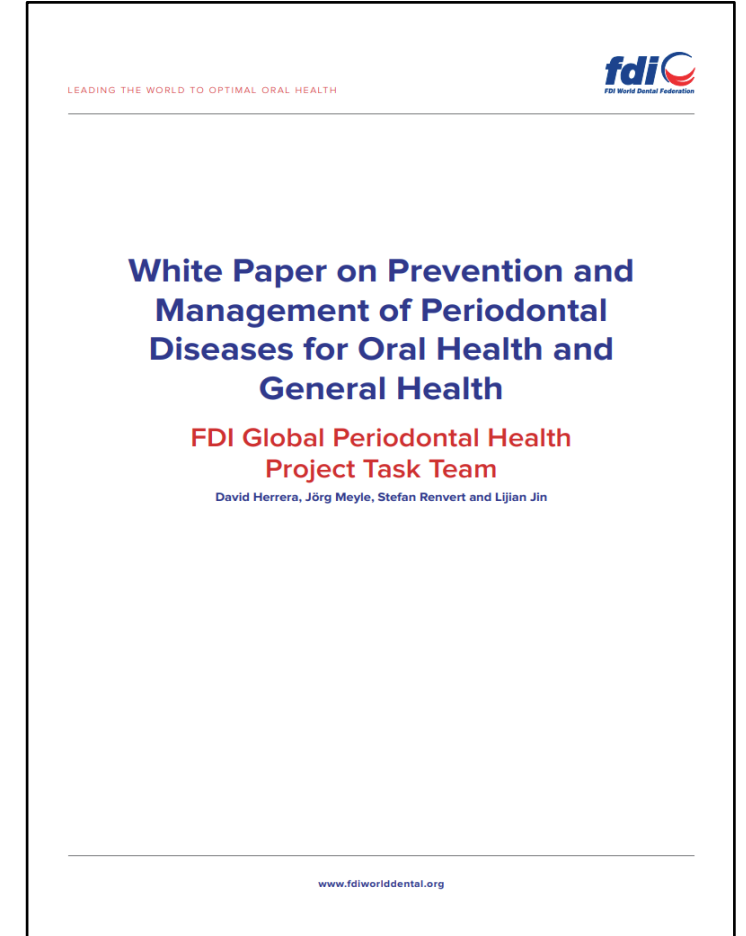
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## Section 6

Prevention of periodontal diseases

## Section 7

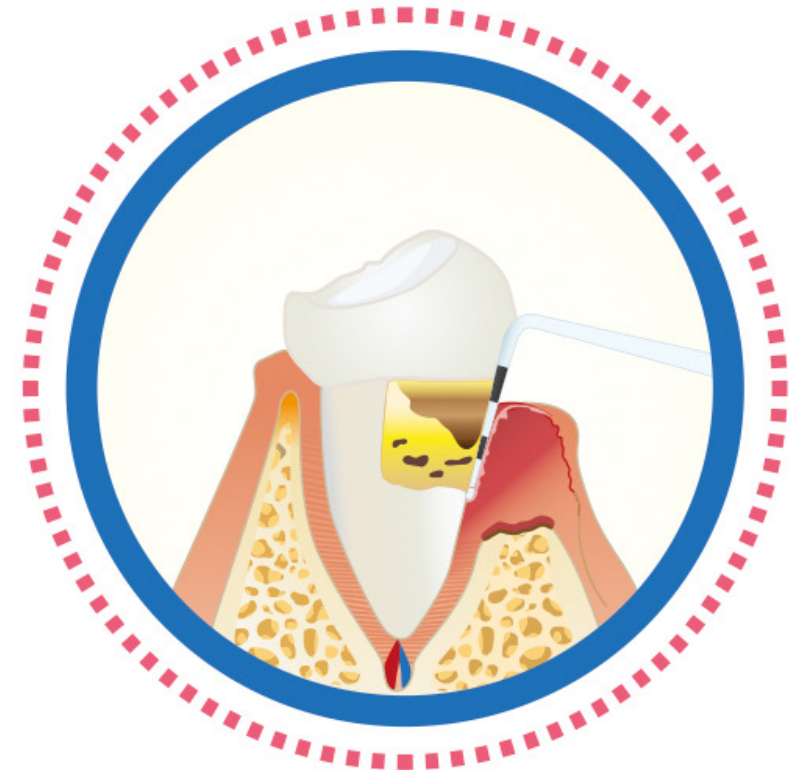
Treatment of periodontal diseases



## Section 6

# Prevention of periodontal diseases

- The early stage of gingival inflammation is **reversible** and can be successfully treated by adequate oral hygiene and professional plaque control.
- Gingivitis, if not effectively controlled, may lead to **irreversible attachment loss** and progress to **periodontitis**.
- Periodontitis **can be prevented** through effective management of gingivitis and promotion of a healthy lifestyle.



## Primary Prevention

- Promoting healthy lifestyle/behaviour changes for controlling risk factors is the key element for preventing periodontal diseases.
- Periodontal examination/diagnosis and risk assessment help to determine the appropriate preventive care and treatment needs for early identification and management of **gingivitis**.



## Primary Prevention

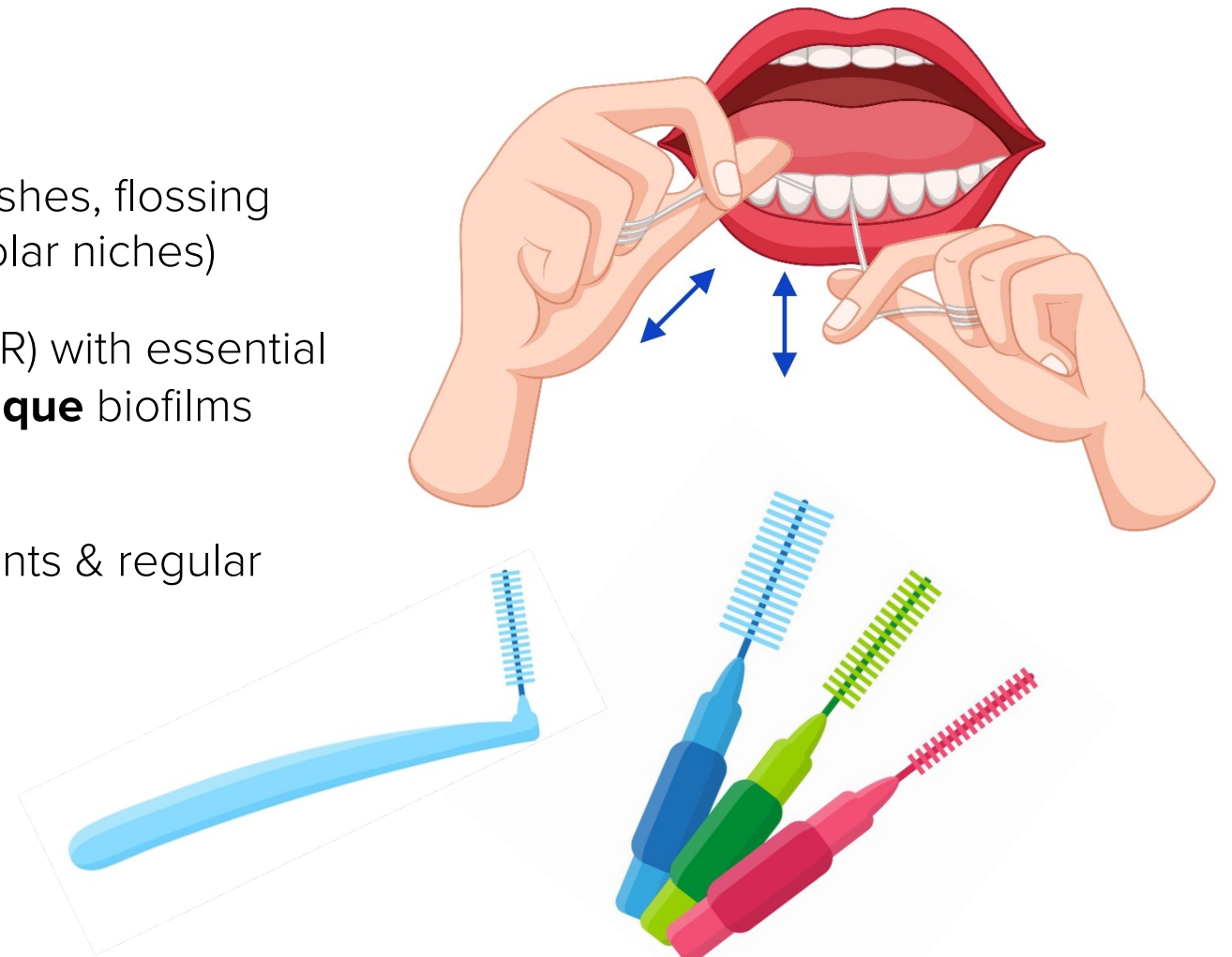
- Professional oral hygiene instructions (OHI) for mechanical plaque control (twice daily for  $\geq 2$  minutes using fluoridated toothpaste) with reinforcements (motivating self-care!) are of profound importance.
  - Manual brushes reduce plaque by 42% (30-53%), and electric brushes by 46% (35-76%)
  - Electric vs. manual brushes: 11% (<3M) to 21% ( $\geq 3$ M) difference.
  - Correct brushing method is very important





## Primary prevention

- Daily interdental cleaning (e.g., interdental brushes, flossing and single-tufted brushes for isolated/retro-molar niches)
- Professional mechanical plaque removal (PMPR) with essential OHI significantly contributes to **controlling plaque** biofilms and gingival inflammation.
- Periodontal screening/assessment for all patients & regular dental visits/care annually.





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## Primary Prevention

- Oral/periodontal health education should start from pre-school years.
- Proactive behaviour change is fundamental to sustained improvements in periodontal health status.
- Gingival bleeding, an early sign of periodontal diseases and risk marker for the onset/ progression of periodontitis, should be highlighted in public health campaigns, professional information sheets and labelling of oral healthcare products.
- Professional care needs to be sought whenever gingival bleeding is present and persists.

## Primary Prevention

- When gingival bleeding is present, self-medication may mask more serious underlying periodontal diseases; professional advice/care should be sought promptly.
- Professional preventive care alone is inappropriate and insufficient in periodontitis patients, as they require effective treatment for their periodontal condition first.
- High-risk individuals: Intensive and additional measures are required, and adjunctive chemical agents (e.g., chlorhexidine mouth rinses) may need to be considered, owing to lower plaque triggering threshold.

## Secondary Prevention

- For optimal long-term tooth retention and oral function, patients participating in secondary prevention programmes require completion of an active phase of periodontal therapy achieving individually-set treatment goals.
- The endpoints of active periodontal treatment are documented before supportive periodontal care (SPC):
  - No pockets – no probing depth (PD)  $\geq$  4mm with bleeding on probing (BoP)
  - No gingival inflammation – BoP  $<$  10% (if BoP  $\geq$  10%, it is “stable periodontitis with gingival inflammation”)

## Secondary Prevention

- Aiming for maintaining periodontal stability and preventing disease recurrence/progression in well-treated periodontitis patients.
- For long-term success of periodontal treatments, the essential secondary prevention programme should be individually designed and undertaken according to patients' risk profiles with appropriate frequency of maintenance, enhanced SPC if needed (2-4 visits/year) and good compliance.
- FDI's resource on Periodontal Diseases "Prevention & Patient Management" is a useful tool to monitor and support patients' needs for periodontal health.

## Secondary Prevention

- Adopt a healthy life-style with essential behaviour changes.
- Establish 'a healthy mind' for oral/periodontal health & general health:
  - Stop the use of tobacco
  - Maintain a healthy Body Mass Index
  - Control psychological stress
  - Get better sleep
  - Adopt a healthy diet
  - Stay active with regular physical exercise



## Secondary Prevention

- Professional SPC including PMPR:
  - Periodontal re-examination for early signs of gingival inflammation and periodontitis.
  - Assessing patients' OH performance, compliance & motivation/re-enforcement of OHI
  - Proactive health promotion, via the Common Risk Factor Approach (controlling risk factors / comorbidities).
  - Intensive mechanical control of supra-/sub-gingival plaque biofilms, calculus & local risk factors.
  - Adjunctive chemical agents (e.g., chlorhexidine mouth rinses) may be beneficial to susceptible patients.
  - Life-long, individualised and regular SPC visits.

## Prevention at the Population Level

- It is crucial to enhance public awareness of oral/periodontal health and the importance of individual oral hygiene as a part of healthy lifestyles.
- Early education for appropriate oral hygiene measures is essential.
- Good **teamwork** between teachers, medical professionals and dental teams is crucial to increase awareness about the importance of good oral hygiene from an early age.



## Prevention: Costs and Benefits

- Successful **prevention** for avoiding disease recurrence and tooth loss dramatically **reduces the expenditure** for crown/bridgework, dentures and dental implants.
- Lifelong **preservation** of one's own teeth enhances health, quality of life and healthy ageing.

**PREVENTION  
WORKS**



**LOW COST**



## Section 7

# Treatment of periodontal diseases



Treatment of Stage I-III Periodontitis  
The EFP S3 Level Clinical Practice Guideline



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CLINICAL PRACTICE GUIDELINE

Journal of Clinical  
Periodontology

WILEY



## Treatment of stage I–III periodontitis—The EFP S3 level clinical practice guideline

Mariano Sanz<sup>1</sup>  | David Herrera<sup>1</sup>  | Moritz Kepschull<sup>2,3,4</sup>  | Iain Chapple<sup>2,3</sup>  |  
 Søren Jepsen<sup>5</sup>  | Tord Berglundh<sup>6</sup>  | Anton Sculean<sup>7</sup>  | Maurizio S. Tonetti<sup>8,9</sup>  |  
 On behalf of the EFP Workshop Participants and Methodological Consultants

Periodontal treatment should follow the recommendations of the EFP Clinical Practice Guideline published in 2020, although it is not included in the White Paper.

## Aims of Therapy

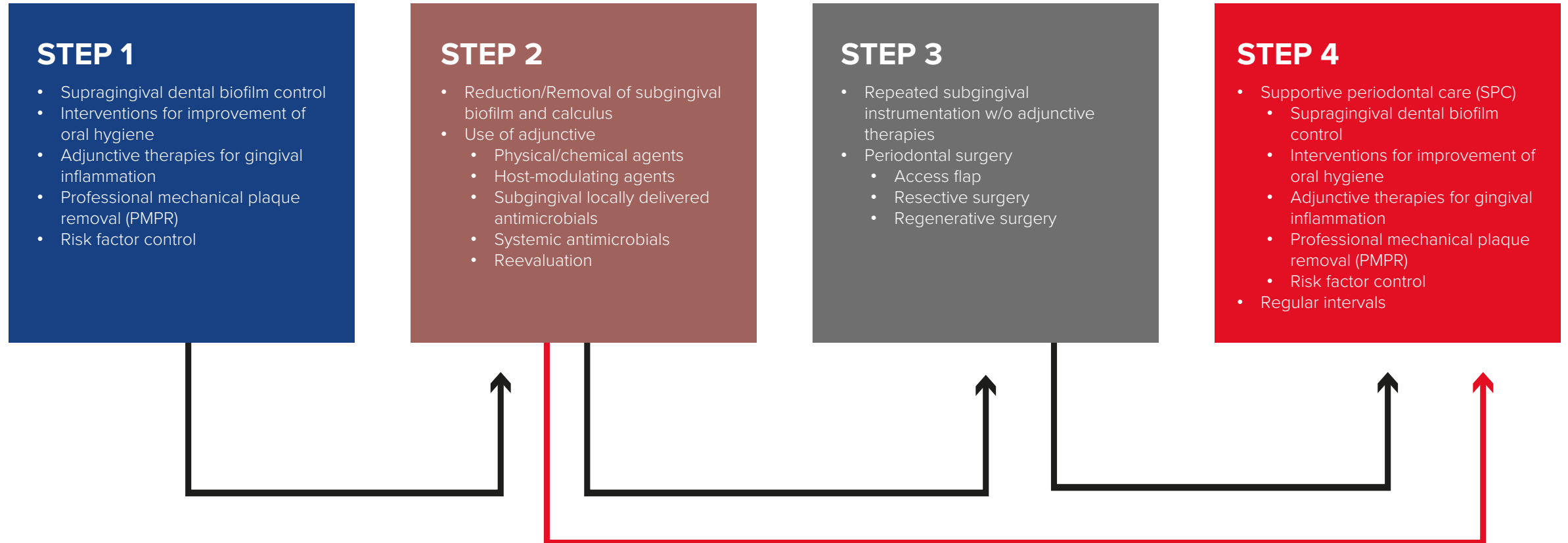
### Oral Health & Healthcare!

Clinically healthy periodontal tissues

- Absence of bleeding on probing (BoP)
- Decreased probing depth (< 4mm )
- Control of plaque biofilms, inflammation (infection) and risk factors
- Stop disease progression
- Regeneration of lost structures



Patients, once diagnosed, should be treated following a pre-established stepwise approach, depending on the disease stage and grade with different interventions as appropriate.



## STEP 1

- Control of supragingival dental biofilms
- Interventions for improvement of oral hygiene
- Adjunctive therapies for gingival inflammation
- Professional mechanical plaque removal (PMPR)
- Control of risk factors



## STEP 1

### 1. Clinical recommendations: first step of therapy

#### Interventions:

- 1.1 Supragingival dental biofilm control (performed by the patient)
- 1.2 Adjunctive therapies for gingival inflammation
- 1.3 Supragingival dental biofilm control (performed by the professional)
- 1.4 Control of risk factors



Guiding behaviour change by motivating patients for:

- Successful removal of supragingival plaque biofilms, and
- Control of risk factors

## STEP 1

- Mechanical plaque control is key for the successful management of gingivitis.
- Plaque scores can be reduced by up to **42%** using a manual toothbrush.
- Powered toothbrushes may provide additional benefits in both short term and long term.





## STEP 2

- Reduction/Removal of subgingival biofilm and calculus
- Use of adjunctive
  - Physical/chemical agents
  - Host-modulating agents
  - Subgingivally delivered antimicrobials
  - Systemic antimicrobials
  - Reevaluation

## STEP 2

### 2. Clinical recommendations: second step of therapy

#### Interventions:

2.1 Subgingival instrumentation

2.2 Use of adjunctive physical agents to subgingival instrumentation

2.3 Use of adjunctive host-modulating agents (local or systemic) to subgingival instrumentation

2.4 Use of adjunctive chemical agents to subgingival instrumentation

2.5 Use of adjunctive locally administered antiseptics to subgingival instrumentation

2.6 Use of adjunctive locally administered antibiotics to subgingival instrumentation

2.7 Use of adjunctive systemically administered antibiotics to subgingival instrumentation

## STEP 2

- Effective control of periodontitis is crucial prior to undertaking long-term supportive periodontal care (SPC) for achieving individually set treatment goals.
- Anti-infective therapy aims for effective removal of supra- and sub-gingival biofilms from the bottom of the pockets using sonic/ultrasonic scalers, air polishing and hand instruments, followed by a long-term and regular supportive care for secondary prevention.



## STEP 2

- Anti-infective therapy may be delivered by conventional staged or full-mouth approaches.
- Systemic antibiotics alone are **NOT** capable of treating periodontitis as a monotherapy.
- Several different **combinations of systemic antibiotics and treatments** may improve clinical outcomes of non-surgical periodontal therapy, especially in subjects affected by severe or “recurrent” periodontitis.
- Residual pockets associated with intrabony defects can be successfully treated surgically, and those associated with suprabony defects may be reduced surgically.
- Overwhelming evidence shows most patients can be successfully treated.

## STEP 3

- Repeated subgingival instrumentation w/o adjunctive therapies
- Periodontal surgery
  - Access flap
  - Resective surgery
  - Regenerative surgery

## STEP 3

### 3. Clinical recommendations: third step of therapy

#### Interventions:

3.1 Access flap procedures

3.2 Resective flap procedures

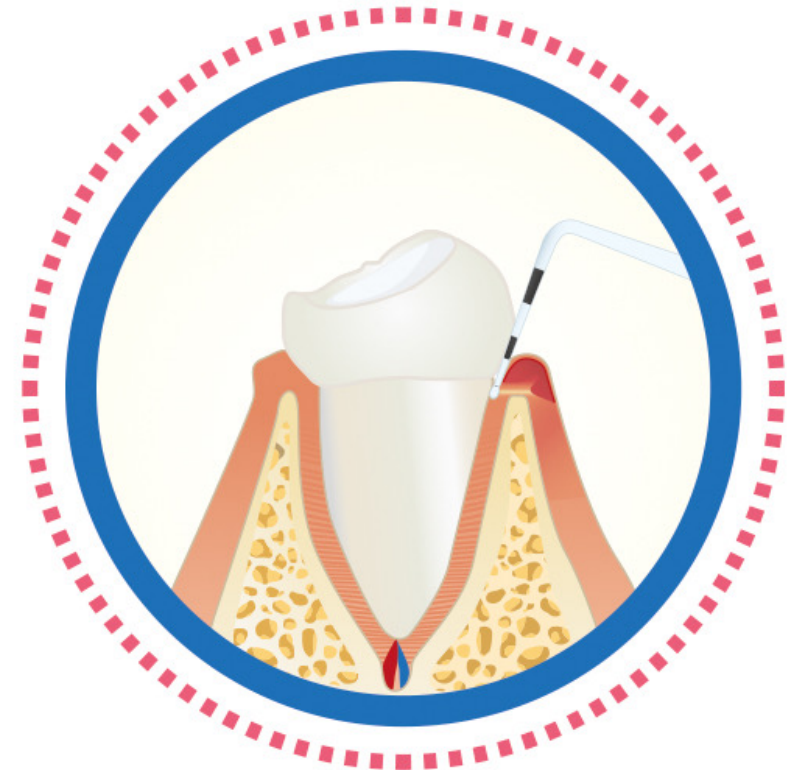
3.3 General recommendations for periodontal surgical procedures

3.4 Management of intrabony defects

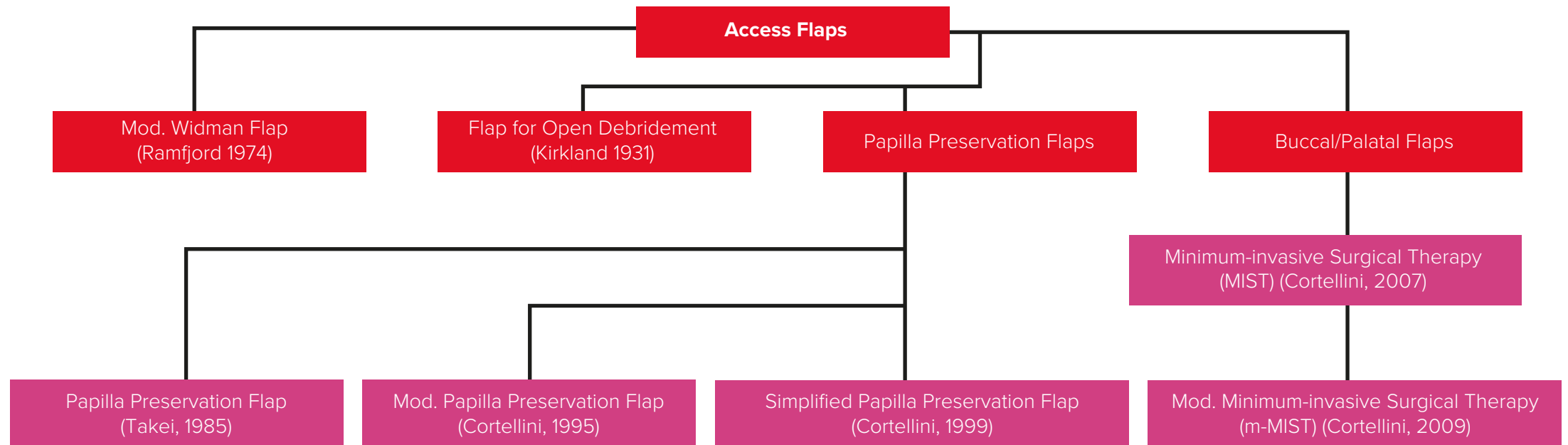
3.5 Management of furcation lesions

## Aims of Surgical Therapy

- Complete elimination of local inflammation
- Removal of ecological niches
- Minimal disturbance of esthetics
- Minimal stress for the patients
- Regenerative healing of defects



## Treatment of Periodontitis – Step 3



Modified according to Graziani F et al., *Periodontol* 2000 2018; 76:150-163.



## STEP 3

- Sites with persisting inflammation and deep pockets may require further treatment to remove remnants of bacterial biofilms and calculus from root surfaces as well as to eliminate ecological niches.
- Re-instrumentation may be considered, with or without adjunctive therapies.
- Surgical therapy consists of an open flap debridement, resective treatment and regenerative procedures.
- Specific considerations should be made for furcation lesions and intrabony defects.

## STEP 4

- Supportive periodontal care (SPC)
  - Control of supragingival dental biofilms
  - Interventions for improvement of oral hygiene
  - Adjunctive therapies for gingival inflammation
  - Professional mechanical plaque removal (PMPR)
  - Control of risk factors
  
- Regular intervals



Periodontal  
disease

## STEP 4

### 4. Clinical recommendations: third step of therapy

#### Interventions:

4.1 Supportive periodontal care: preliminary considerations

4.2 Control of supragingival dental biofilms (performed by the patient)

4.3 Adjunctive therapies for gingival inflammation

4.4 Control of supragingival dental biofilms (performed by the professional)

4.5 Control of risk factors

## COSTS & BENEFITS

- Lack of long-term prospective randomized clinical trials on the cost-effectiveness of different treatment modalities.
- Regenerative surgical therapy costs more initially, however it requires less re-interventions over the years as compared to routine open flap debridement.
- An **appropriate reimbursement scheme** is of fundamental importance for undertaking periodontal treatments in dental clinic.
- An **inappropriate** reimbursement results in premature tooth extraction and an increased risk for additional expensive therapy.

# WHAT ARE THE CURRENT PROBLEMS/CHALLENGES AND RECOMMENDED ACTIONS?

## Section 8

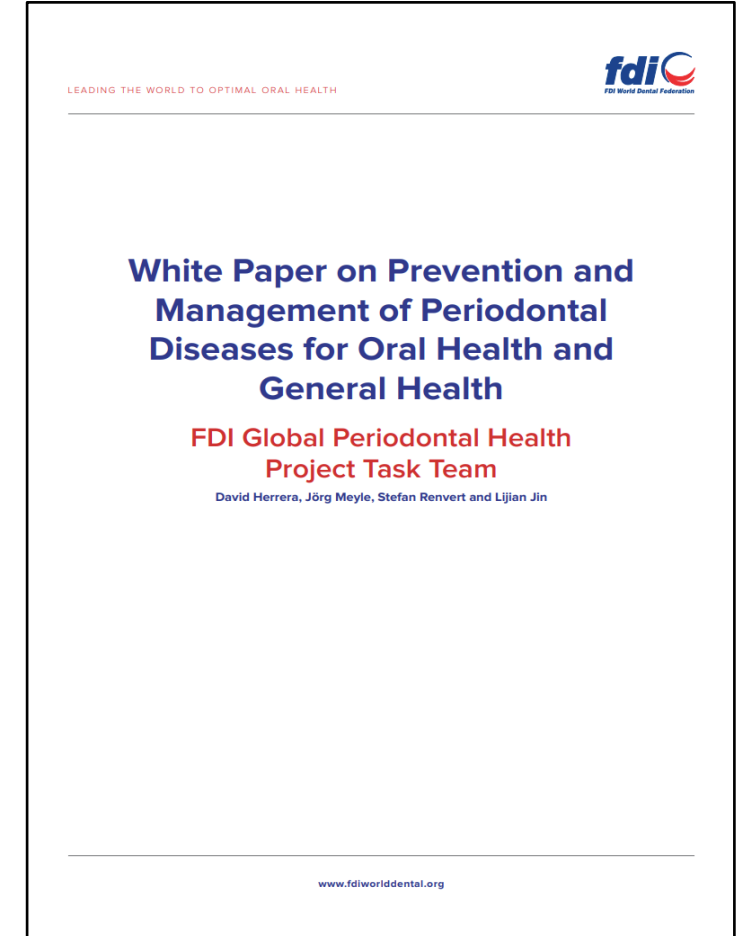
Current problems and major challenges of periodontal care

## Section 9

Recommendations, solutions, calls for action and perspectives

## Section 10

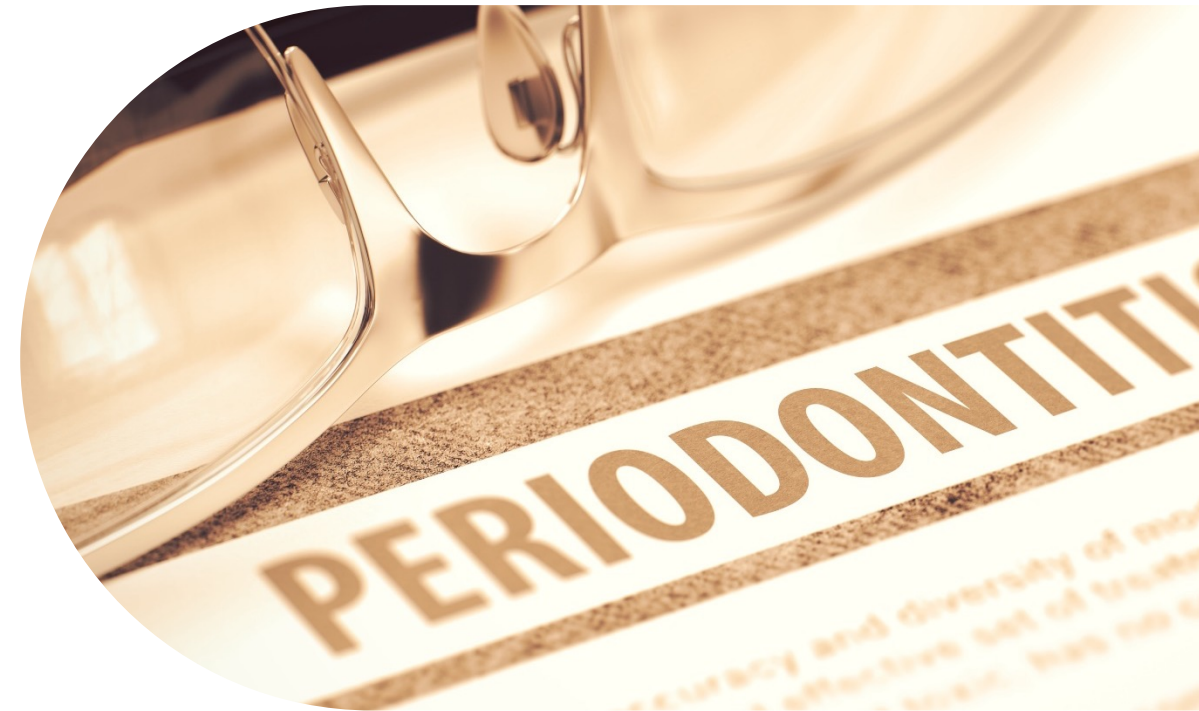
Action Plan



## Section 8

Current problems and major challenges  
of periodontal care

- New strategies are needed for tackling periodontal diseases, promoting oral and general health, as well as healthy ageing.
- Oral/periodontal health is often not reflected in national health policies or guidelines that mainly focus on targeting chronic NCDs.



## LOW AWARENESS

- Low awareness of periodontal health remains a major problem worldwide.
- In 2017, a [survey conducted by FDI, among its member National Dental Associations](#), shows that awareness of periodontal health is perceived to be low or very low (44%) among the general public and oral health professionals.

### **FDI Global Periodontal Health Project**

**Results of a Global Survey with FDI National Dental Associations**



## PERIODONTAL NEGLIGENCE

- Barely half of the NDAs reported that periodontal screening is mandatory in routine dental practice.
- Periodontology is a registered specialty in only half of the countries surveyed.



## PERIODONTAL NEGLIGENCE

- Dental implants are perceived to be the solution for lost teeth and the treatment for periodontitis patients with multiple tooth loss.
- The reality is that infections/inflammation around implants are much more difficult to handle than periodontitis.
- The use of implants in periodontally susceptible patients poses an increased risk for the development of peri-implantitis.

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## **SOCIO-ECONOMIC BARRIERS**

- Dental care is difficult to access in many areas of the world.
- In many countries, oral care is not part of the public health services.
- Populations with low socio-economic status have limited access to dental care.
- Less than 40% of elderly visit the dentist annually.

## AGEING POPULATION AND HEALTH

- The proportion of global population over 60 years of age will nearly double from 12% (2015) to 22% (2050)
- By 2050, 80% of the elderly will be living in low- and middle-income countries.
- Various common diseases and health conditions are associated with ageing (e.g., NCDs and multiple complex geriatric syndromes).
- There will be major challenges for social and health systems in all countries to adapt to the demographic shift.



- The increasing percentage of the population who are elderly, have chronic diseases and are taking medication poses a great challenge for the dental community.
- Collectively, socio-economic factors and general health status will be important elements in the management of adults with periodontal diseases in the future.

## Section 9

Recommendations, solutions,  
calls for action and perspectives

- The inflammatory burden of periodontitis may have an impact on other major chronic NCDs, due to common risk factors like tobacco smoking.
- Oral health professionals and other healthcare workers need to **work together** to make patients aware of the links between NCDs and periodontitis.



## ADVOCACY AND AWARENESS

- There is a greater potential for positive change by addressing the shared risk factors for periodontal diseases and other NCDs, as well as integrating oral health into Universal Health Coverage programmes.
- Advocating governments to incorporate oral health into general health policies and establish strategic partnerships with NGOs and other health alliances for promoting oral health and general health.
- Over the years, the awareness of periodontal diseases remains to be low.
- The resolution from the 74<sup>th</sup> World Assembly of the World Health Organisation (2021) on oral health sets a new global agenda.





## PREVENTION AND EARLY DIAGNOSIS

- It is evident that periodontitis can be prevented through effective control of gingivitis and promotion of a healthy lifestyle at both individual and population levels.
- Undertaking active work on smoking cessation programmes and dietary advice through the common risk factor approach is essential to prevent periodontal diseases.
- Early diagnosis is essential for cost-effective periodontal care and better outcomes.

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## **BENEFITS OF EFFECTIVE MANAGEMENT OF PERIODONTAL DISEASES**

- Evidence from big insurance data demonstrates that the medical costs and hospitalization rate for individuals with type 2 diabetes, cerebral vascular disease and coronary artery disease reduce by significant amounts, if they are concurrently treated for periodontal diseases.
- Non-surgical treatment of periodontitis can lower blood glucose levels in diabetic patients and improve endothelial function.

- Periodontal health literacy and essential knowledge of periodontal diseases and care (e.g., early signs, diagnosis, basic treatment, referral and supportive periodontal care) should be adequately incorporated in dental education curricula, basic medical education and continuing education programmes.
- Periodontal health is an essential component of healthy ageing.



# Section 10

## Action Plan



- The first global consensus has recently reached on the proactive strategies for prevention, diagnosis and treatment of periodontal diseases among national & international societies of periodontology.
- FDI has strongly promoted and advanced oral/periodontal health agenda through the implementation of its Global Periodontal Health Project since 2016.
- It is now imperative to call for global action on promotion of oral/periodontal health and disease prevention for the benefits and well-being of humankind through global healthcare alliances and collaborative teamwork.



## WHAT DO WE WANT?

- Develop global strategies for oral and periodontal health, with refined action plans for individual countries.
- Produce toolkits with professional recommendations.
- Develop user-friendly periodontal health leaflets for all.
- Collaborate with governments, NGOs, corporate partners and other stakeholders to promote oral/periodontal health.
- Engage with the medical profession to highlight periodontal diseases as chronic NCDs sharing risk factors with other NCDs.
- Promote primary prevention of systemic diseases/common NCDs at dental clinics.
- Oral health as an essential component of a healthy lifestyle is integrated with general health agenda, in collaboration with major stakeholders like WHO & the World Health Professions Alliance.

LEADING THE WORLD TO OPTIMAL ORAL HEALTH

# White Paper on Prevention and Management of Periodontal Diseases for Oral Health and General Health

**DAVID HERRERA, JÖRG MEYLE, STEFAN RENVERT AND LIJIAN JIN**

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