



# PERIO&CARDIO HEALTH

**VITIS** gingival

**PERIO·AID**

**DENTAID**  
Oral Health Experts

# PERIODONTAL HEALTH & CARDIOVASCULAR HEALTH

Noncommunicable diseases with a significant impact on health and quality of life



Consenso EFP-WHF<sup>1</sup>



**Periodontal diseases** (gingivitis and periodontitis) are among the most prevalent diseases in the world.

**80% of people over the age of 35** suffer from periodontal disease.

Specifics of **periodontitis**:

- **High prevalence of 45-50%** of the overall population
- **Severe periodontitis is the 6th most common disease** throughout the world.
- It **can cause tooth loss** and is associated with nutritional deficiency, speech impairment, low self-confidence and, overall, with a lower quality of life.
- It is **related to more than 50 systemic pathologies**.

## **Cardiovascular diseases (CVD)**

involve the heart or blood vessels and include:

- Ischemic heart disease
- Stroke
- Hypertension
- Rheumatic heart disease
- Cardiomyopathy
- Atrial fibrillation

## **Responsible for 1 in 3 of deaths worldwide**

and 45% of deaths in Europe.

**Most common diseases in developed countries**, where cases

are increasing due to:

- Aging of the population
- Sedentary lifestyles
- Unhealthy diets

## **Risk factors common to both diseases**



Smoking



Stress  
Hypertension



Obesity



Unhealthy diet



Lack of  
exercise



# Reasons for this association in patients with periodontitis:

## Bacteraemia

Direct passage of oral pathogens and their derivatives into the bloodstream.

- Periodontal bacteria can reach vascular tissues <sup>2,3</sup>.
- Bacteria have been found in affected tissues (atheromatous plaque)<sup>3,4</sup>.
- Se ha demostrado en modelos animales que pueden promover la aterosclerosis<sup>5,6</sup>.

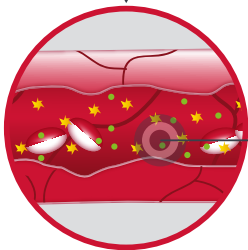
## Systemic inflammation

Inflammatory response produced in the periodontium and which passes to the blood.

- The pro-inflammatory signals produced in the periodontium and the antibodies from this inflammatory response can pass into the blood and interact with endothelial cells and modified LDL, promoting the formation, maturation and exacerbation of atheromatous plaque.

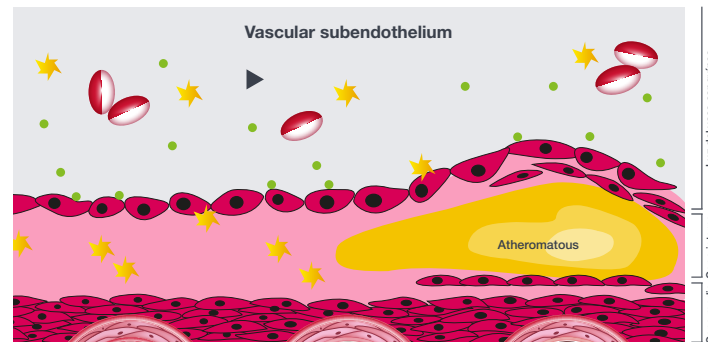


Periodontal Disease



Blood vessel

★ Periodontal bacteria (*P. Gingivalis*, *F. Nucleatum*)  
 ● Proinflammatory signals (Citoquinas IL6, IL8...)



Blood vessel

Formation of atheromatous plaque

Maturation of atheromatous plaque

## Greater risk of cardiovascular disease

- 2,1 times for acute myocardial infarction<sup>7</sup>
- 4,3 times for stroke<sup>8</sup>
- 2,3 times for peripheral vascular disease<sup>9</sup>



## Periodontitis is included as a risk factor for the development of cardiovascular diseases<sup>1,10</sup>.

### Periodontitis is included as a risk factor for the development of cardiovascular diseases<sup>1</sup>:

- High levels of cytokines and inflammatory mediators (IL-6)
- High levels of C-reactive protein (CRP)
- Higher levels of fibrogen (thrombotic factors)
- Higher levels of traditional CVD risk factors such as cholesterol, LDL, Triglyceride, VLDL, oxidised LDL, etc.

Patients with periodontitis are at greater risk for developing cardiovascular disease.



### Efficacy of periodontal treatment on cardiovascular risk<sup>1, 11, 12</sup>

#### Periodontal treatment reduces systemic inflammation since:

- It reduces C-reactive protein levels.
- It improves clinical measures of endothelial function.



### Periodontal patient

Objective: Treatment of periodontal disease

#### Following in-office periodontal treatment

**PERIO-AID 0.12**  
Fights oral biofilm



2-4 WEEKS

#### Control of Periodontal disease

Due to the cardiovascular risk that periodontitis poses, it is important for all patients to control their gingival health daily.

**PERIO-AID 0.05**  
Active control of oral biofilm



PROLONGED USE

Healthy gums

**VITIS GINGIVAL**  
Maximum efficacy in the daily care of teeth and gums



DAILY USE



### Patient with cardiovascular disease

Objective: Maintenance of gingival health to prevent increased risk of cardiovascular events.

**PERIO-AID 0.05**  
Active control of oral biofilm



PROLONGED USE

Healthy gums

**VITIS GINGIVAL**  
Maximum efficacy in the daily care of teeth and gums



DAILY USE



### Patient with cardiovascular disease + periodontitis

Objective: Treatment of periodontal disease + Maintenance of gingival health to prevent increased risk of cardiovascular events.

#### Following in-office periodontal treatment

**PERIO-AID 0.12**  
Fights oral biofilm



2-4 WEEKS

#### Control of Periodontal disease

**PERIO-AID 0.05**  
Active control of oral biofilm



PROLONGED USE



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Collaborator of the 2019 **Perio & Cardio Workshop**, organised by the **European Federation of Periodontology (EFP)** and the **World Heart Federation (WHF)**<sup>1</sup>.