



# PERIODONTIUM AND PERIODONTAL DISEASES

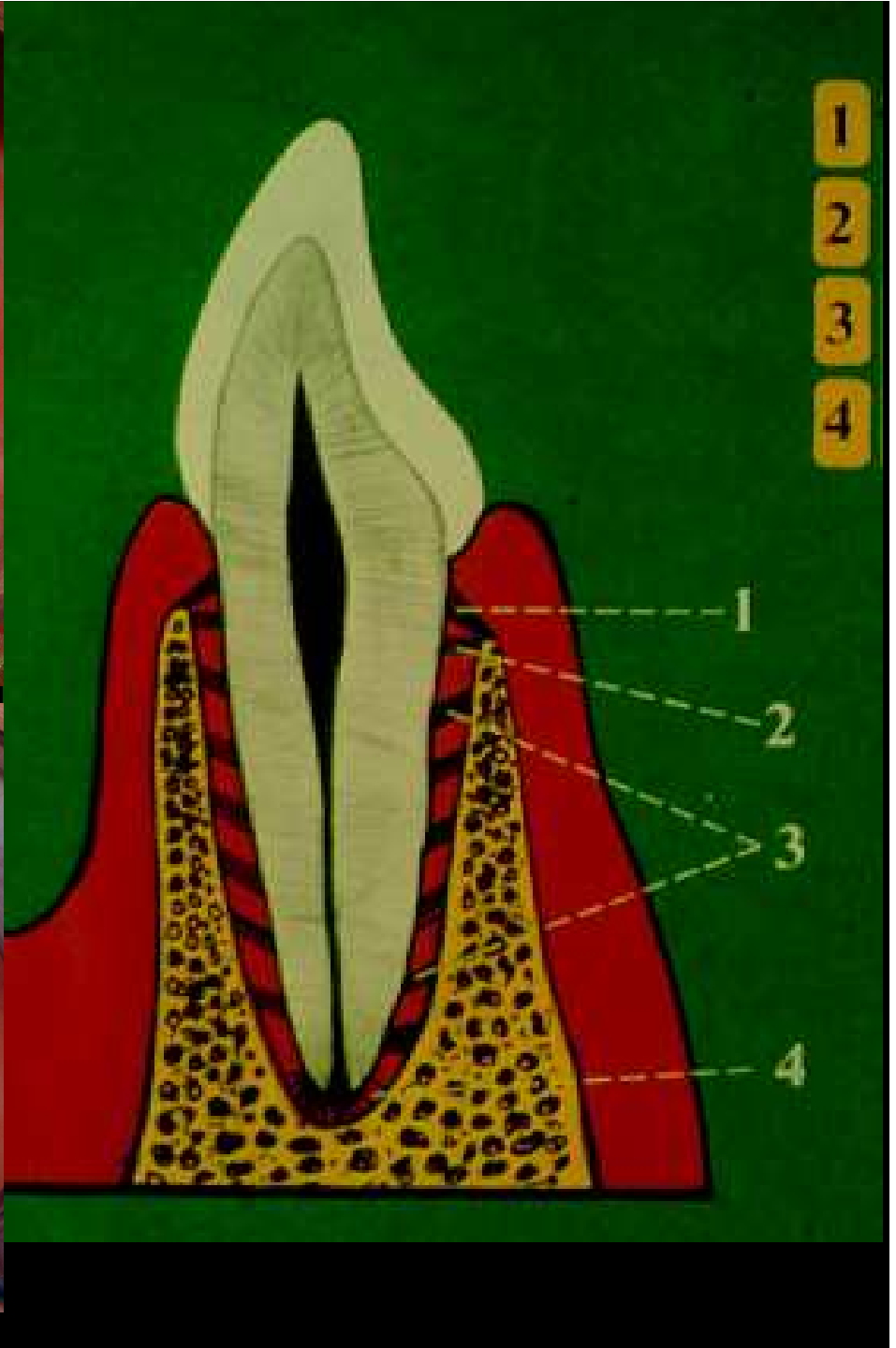




## **PERIODONTIUM**

### **A COMPOSITION OF TOOTH SUPPORTING TISSUES**

- 1 . GINGIVA
2. CEMENTUM
3. PERIODONTAL LIG.
4. ALVEOLARI BONE



**DENTAL PLAQUE - THE MAJOR ETIOLOGIC FACTOR  
OF ALL KIND OF PERIODONTAL DISEASES**



**Plaque is natural and exists in harmony with the host in health. Maintenance of health depends on the balance of the homeostatic relationship between the bacterial challenge and the host response.**





**LARGE MASS OF SUPRAGINGIVAL  
PLAQUE AND CALCULUS**

THE SUBGINGIVAL PLAQUE IS  
TOTALLY INDEPENDENT OF THE  
SUPRAGINGIVAL ORAL ENVIRONMENT  
IT FORMS A BIOFILM, THAT CAN ONLY  
BE REMOVED BY PROFESSIONAL  
MECHANICAL DEBRIDEMENT



**DISEASE is the consequence of this balanced relationship breaking down,**

**-provoked by either changes to the magnitude or nature of the microbial challenge**

**-or the scale and appropriateness of the host response**

**(Socransky et al. 1998).**



**Most bacterial species currently implicated in periodontitis can be found in periodontally healthy subjects in low numbers.**

**In some geographical regions, some species or clones are infrequently detected in periodontal health, and therefore could be considered as not belonging to the resident microflora in these populations**

**(Van Winkelhoff et al. 2002).**





# **BACTERIAL BIOFILM**

**IS MADE UP OF :**

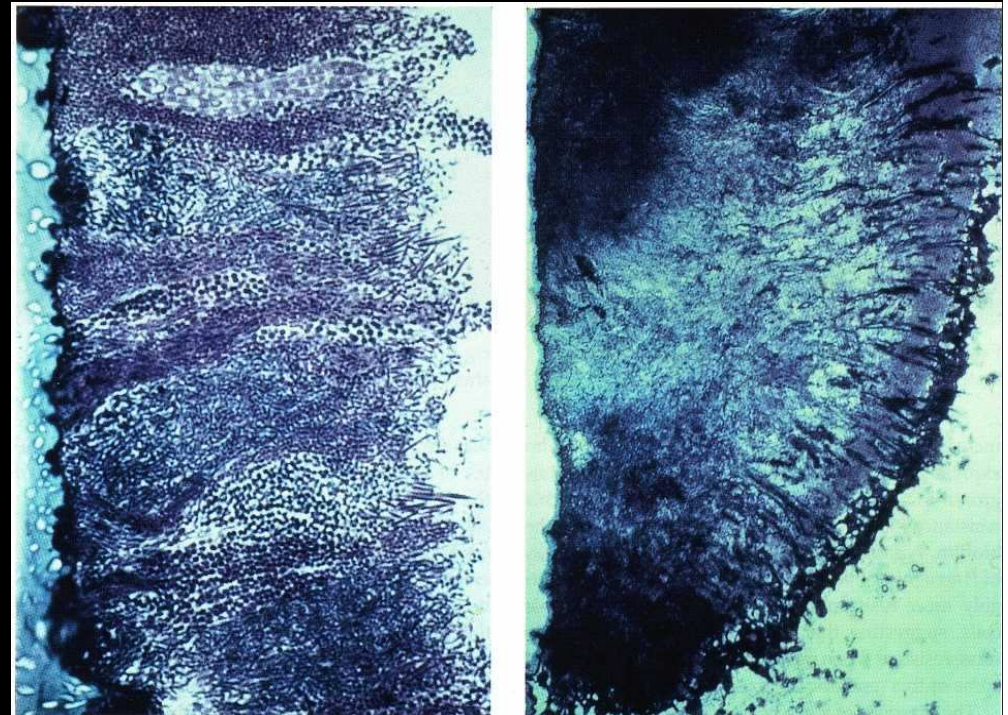
**„FRIENDLY COMMENSAL BACTERIA AND HOSTILE PERIODONTOGENIC STRAINS**

**THE MANIFESTATION OF PERIODONTAL BREAKDOWN IS DEPENDENT ON THE HOST'S SUSCEPTIBILITY AND THE VIRULANCE OF THE BIOFILM**

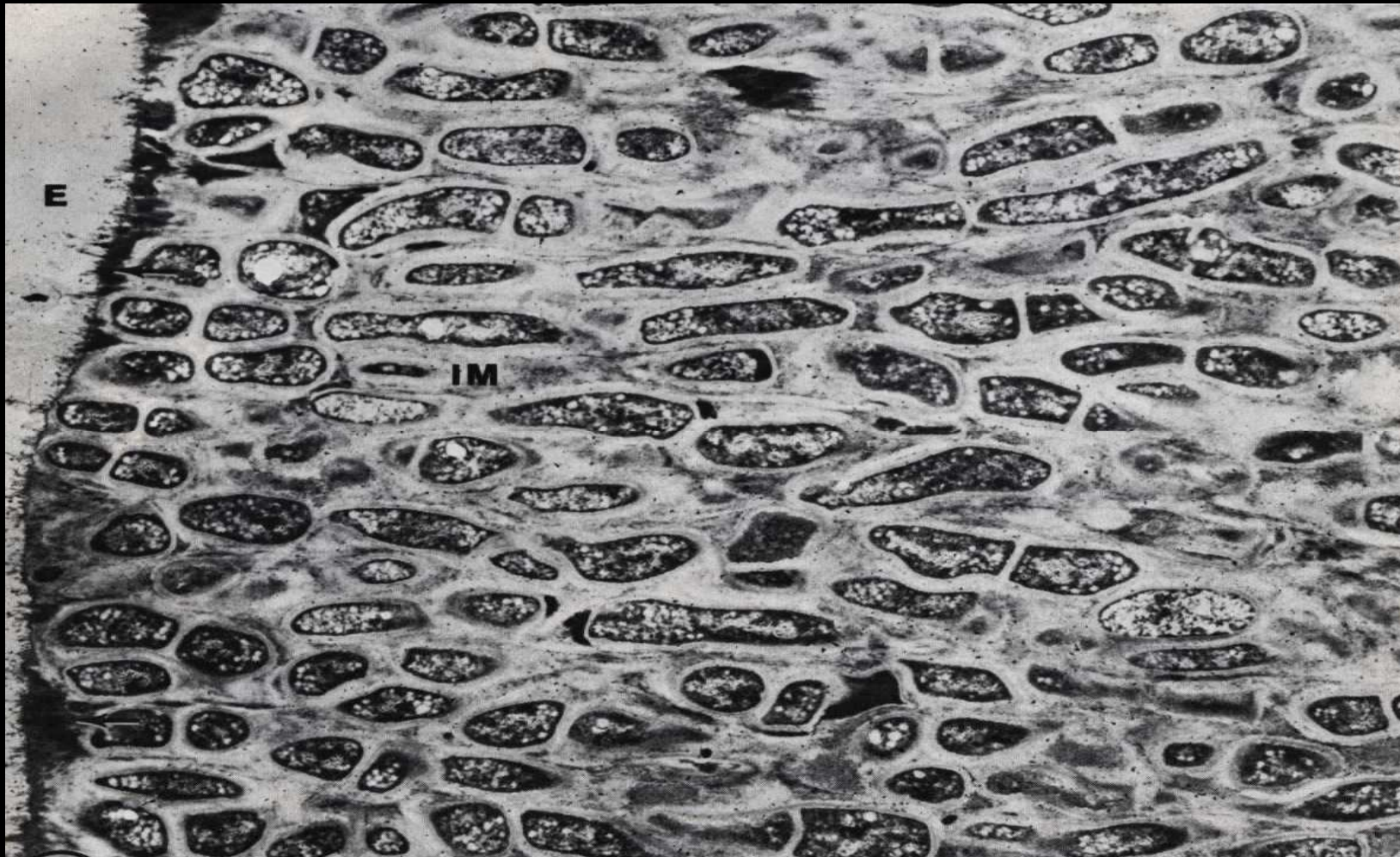


**BIOFILMS of oral bacteria are also more tolerant of antibiotics (e.g. amoxicillin, doxycycline, minocycline, metronidazole) than planktonic cells (Larsen 2002, Socransky & Haffajee 2002, Noiri et al. 2003),**

**BIOFILMS of *P. gingivalis* tolerated 160 times the MIC of metronidazole that had been determined for planktonic cells (Wright et al. 1997),**



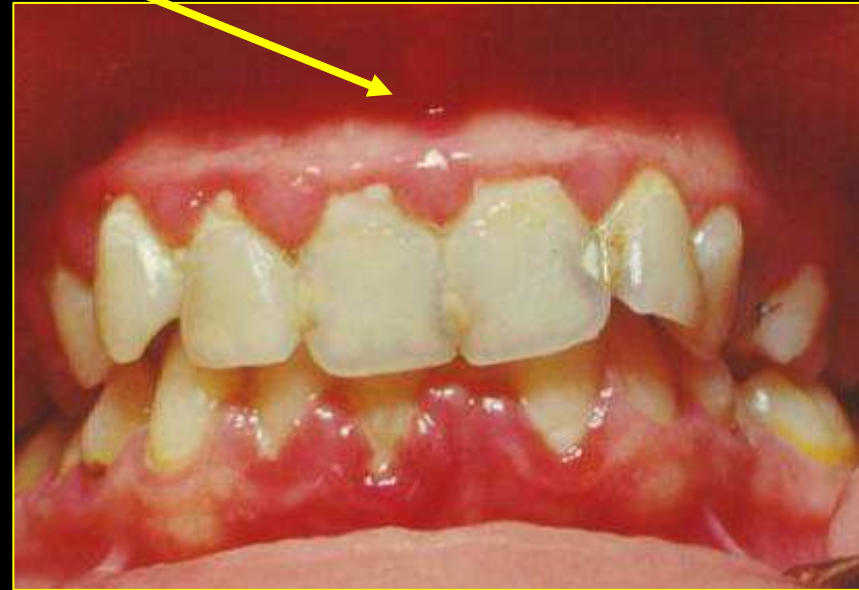
The age of the biofilm can also be a significant factor; older biofilms (72 h) of *S. sanguinis* were more resistant to chlorhexidine than younger (24 h) biofilms (Millward & Wilson 1989).



THERE CAN BE A NULL STATE BETWEEN  
BIFILM AND HOST – NO OVERT  
INFLAMMATORY REACTION

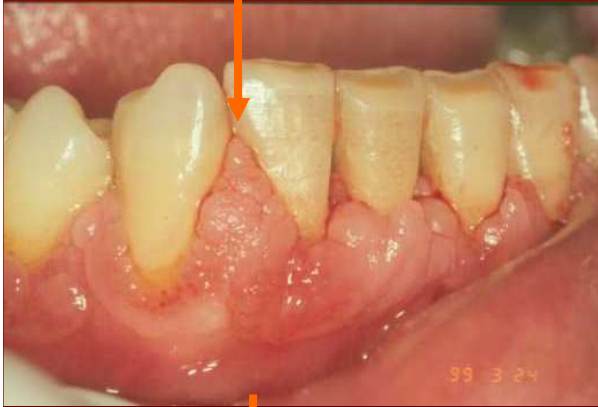
OR

INFLAMMATION





**DENTAL PLAQUE**



**GINGIVITIS**



**PERIODONTITIS**



## **GINGIVITIS**

**DISEASE OF THE  
FREE GINGIVAL  
MARGIN**

**PROTECTION  
AGAINST PLAQUE**



## **PERIODONTITIS**

**IRREVERSIBLE DAMAGE OF  
THE ATTACHMENT  
APPARATUS**

**THE CONSEQUENCE OF  
THE INADEQUATE GINGIVAL  
PROTECTION**

DENTÁLIS PLAKK

WHY NOT  
NECESSARILY ALL  
GINGIVITIS  
PROGRESSES TO  
DESTRUCTIVE  
PERIODONTITIS????

GINGIVITIS

PARODONTITIS





**DENTAL PLAQUE**



**GINGIVITIS**



**PERIODONTITIS**



**SEVERAL LOCAL AND SYSTEMIC FACTOR CAN MODIFY THE COURSE OF INFLAMMATION AND THE DEGREE OF TISSUE DESTRUCTION**



**SEVERAL SYSTEMIC  
AND LOCAL  
MODIFYING  
FACTORS**



**CLASSIC THEORY**

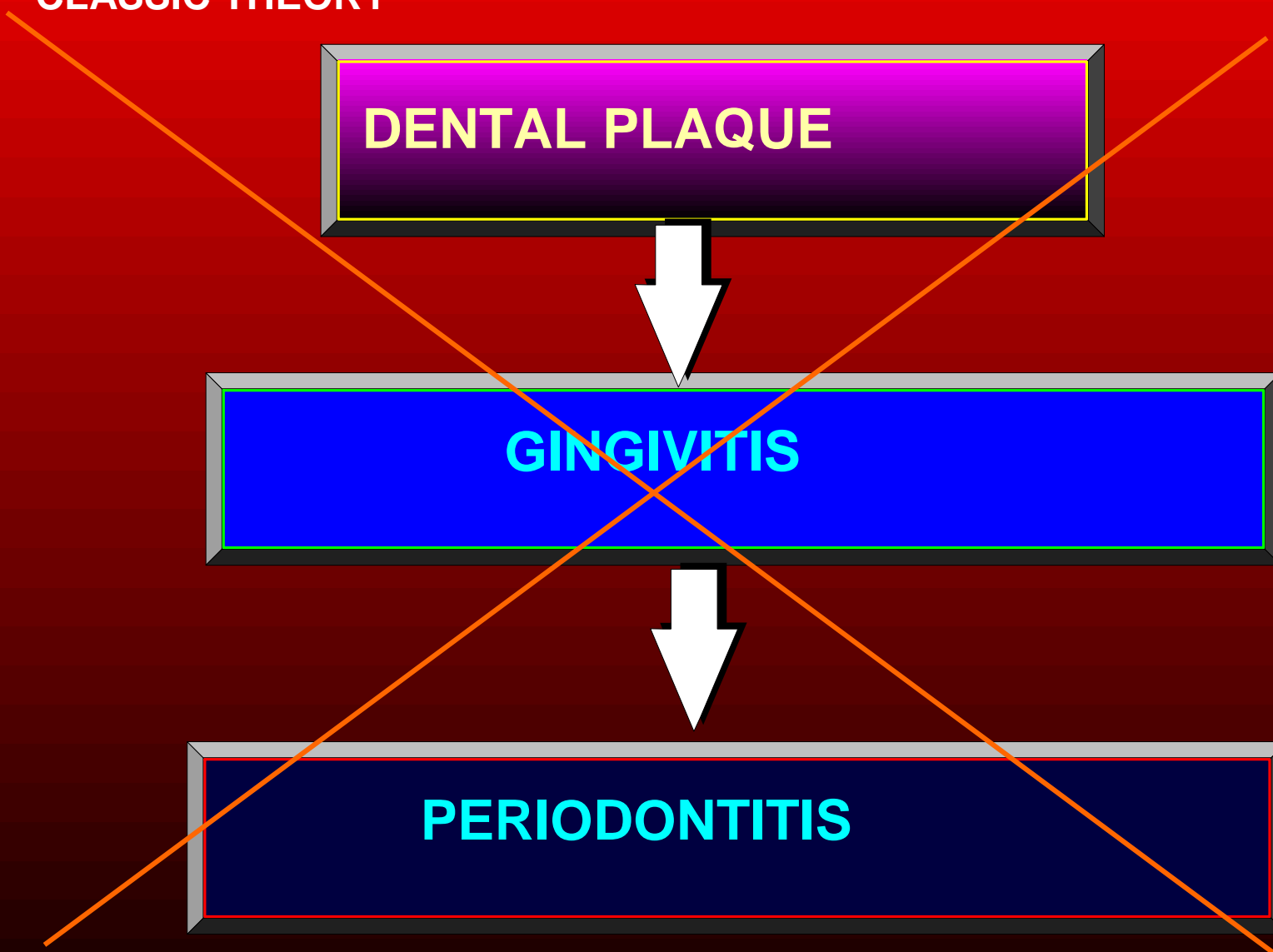
**DENTAL PLAQUE**



**GINGIVITIS**



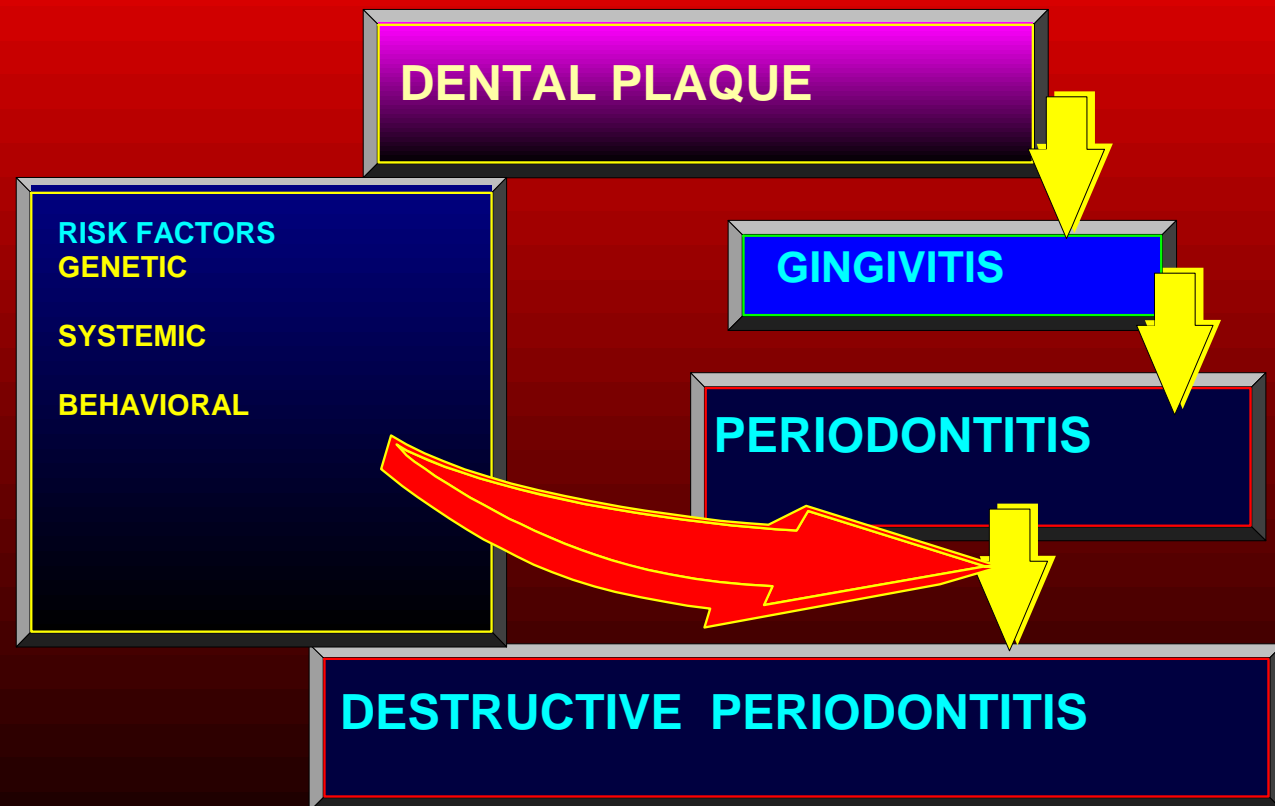
**PERIODONTITIS**



**SEVERAL SYSTEMIC  
AND LOCAL  
MODIFYING  
FACTORS**



# DENTAL PLAQUE IS NECESSARY BUT NOT SUFFICIENT ETIOLOGIC FACTOR OF DESTRUCTIVE PERIODONTITIS



## RISK FACTORS:

### GENETICS

1(IL-1)

TNF

### SYSTEMIC

ENDOCRINE

CARDIOVASCULAR

IMMUNOLOGICAL

### BEHAVIORAL

STRESS

DIET

SMOKING

WAY OF LIFE

# GINGIVITIS







## **LOCAL PLAQUE RETENTIVE FACTORS**



**HEAVY SUPRAGINGIVAL  
PLAQUE AND DENTAL  
CALCULUS DEPOSITION**





**HEAVY  
SUPRAGINGIVAL  
DENTAL CALCULUS  
DEPOSITION  
MECHANICALLY  
SEPARATES FRONT  
TEETH**





## **FAULTY RESTAURATIONS**



**SEEMINGLY FAIR  
SUPRAGINGIVAL  
ORAL HYGIENE  
WITH HEAVY  
SUBGINGIVAL  
CALCULUS  
DEPOSITION**





# PERIODONTITIS





**SEVERE ALVEOLAR  
BONE LOSS**

# HOW TO TREAT PERIODONTAL DISEASE ????









THE GOAL OF  
PERIODONTAL  
THERAPY ????



THE MAJOR GOAL  
OF ANY CAUSE  
RELATED  
PERIODONTAL  
TREATMENT IS:

TO CLEAN TEETH  
AND RESTORE  
ORAL HYGIENE



THE MAJOR GOAL  
OF ANY CAUSE  
RELATED  
PERIODONTAL  
TREATMENT IS:

TO STOP AND  
ARREST THE  
PRGRESSION OF  
DISEASE



THE MAJOR GOAL  
OF ANY CAUSE  
RELATED  
PERIODONTAL  
TREATMENT IS:

TO MAINTAIN LONG  
LASTING RESULTS  
AND HEALTH IN  
ORAL CAVITY





TOP PRIORITY IS  
TO ANTICIPATE THE  
OCCURANCE OF  
DISEASE:

PRIMARY AND  
SECONDARY  
PREVENTION





**THE INFECTED PERIODONTAL  
POCKET CAN BE A DENTAL  
FOCUS**

**CARDIOVASCULAR DISEASES**

**DIABETES MELLITUS**

**PERIODONTITIS**

**RESPIRATORY DISEASES**

**GASTRO-  
INTESTINAL  
DISEASES**

**OSTEOPOROSIS**

**PRETERM LW BIRTH**

