

ROLE OF HYGIENIST

- **Education about appropriate oral health self-care.**
- **Provide periodic oral examinations.**
- **Provide early intervention and preventive care services.**
- **Demonstrate to the patient that you want to provide him/her with the best treatment.**
- **Ensure patients' comfort so he/she feel motivated to revisit and assess his/her progress.**
- **Proper infection control to prevent spread of pathogenic microbes**
- **Remind patient that oral disease leads to systemic disease (and vice versa in some cases)**

REFERENCES

Gonzalez, Octavio A.; Li, Mengtao; Ebersole, Jeffrey L. and Huang, Chifu B(2010)HIV-1 Reactivation Induced by the Periodontal Pathogens Fusobacterium nucleatum and Porphyromonas gingivalis Involves Toll-Like Receptor 4 and 9 Activation in Monocytes/Macrophages, Clinical and Vaccine Immunology doi: 10.1128/CVI00009-10

Imai, Kenichi; Ochiai, Kuniyasu; Okamoto, Takashi (2009), Reactivation of Latent HIV-1 Infection by the Periodontopathic Bacterium Porphyromonas gingivalis Involves Histone Modification, The Journal of Immunology doi 10.4049/jimmunol.0802906

Imai, Kenichi; Ochiai, Kuniyasu; Okamoto, Takashi (2010) Molecular Mechanisms of HIV-1 Latency and Its Breakdown by Periodontal Diseases, J. Oral Biosci. 52(30): 260-267, 2010

T Schaller, Ke Ocwieja, J Rasaiyaah, et al.(2011)HIV-1 Capsid-Cyclophilin Interactions Determine Nuclear Import Pathway, Integration Targeting and Replication Efficiency. PLoS Pathogens 7(12):e1002439,2011

**BRUSH
YOUR**

TEETH, LET

HIV SLEEP

**Linking the
periodontopathic bacterium
P. gingivalis with the
reactivation of latent HIV
infected individuals**

**MELANIE CLARE, KELLY PANAYIOTOU
AND KEVIN ROJASG**



WHAT IS *P. GINGIVALIS*

**Porphyromonas gingivalis* is a gram negative anaerobic bacterium belonging to the phylum Bacteroidetes.

*It is known to cause gingivitis (inflammation of gingiva) and periodontitis (inflammation of the periodontium or other supporting tissues).

*It is normally found within the mouth, GI tract and colon.

*Works with other bacteria to create plaque biofilm subgingivally, replacing the gram positive facultative bacteria

Direct link between *P. gingivalis* and HIV

**Porphyromonas gingivalis*, can activate TLR2, TLR4, and TLR9 (influencing the production of cytokines and chemokines).

*These TLRs are involved in HIV-1 reactivation. Bacteria associated with oral and systemic chronic inflammatory disorders enhance HIV-1 reactivation in monocytes/macrophages through TLR2 and TLR9 activation. Specifically HIV-1 promoter activity was increased when BF24 and THP89GFP monocytes/macrophages were introduced to periodontal pathogens.

*Butyric acid, an endotoxin from *P. gingivitis* inhibits HDAC enzyme activity and stimulating transcription of HIV gene

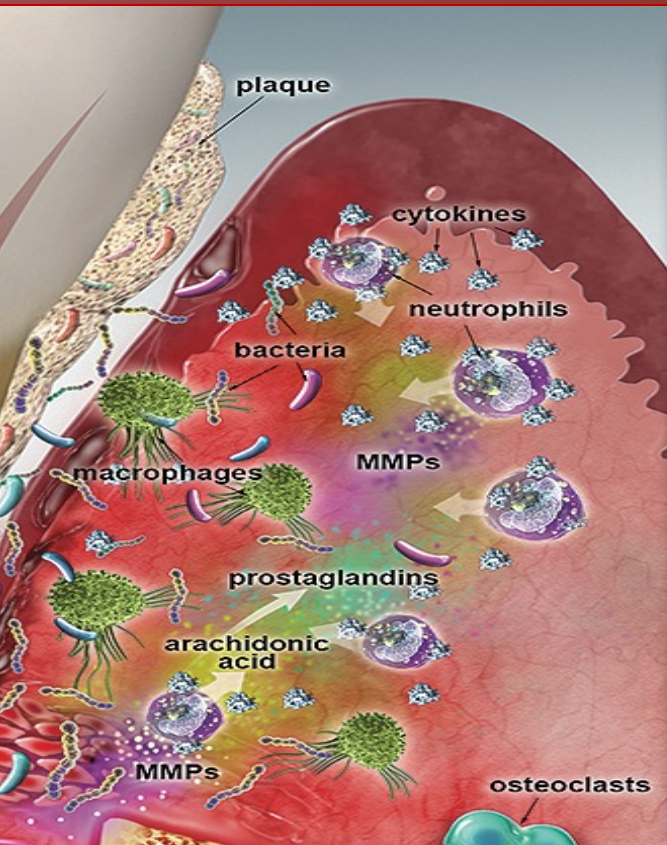
WHAT IS HIV

*HIV(human immunodeficiency virus) is a lentivirus that is known to cause Acquired Immunodeficiency Syndrome(AIDS) a condition that specifically affects humans by suppressing their immune system

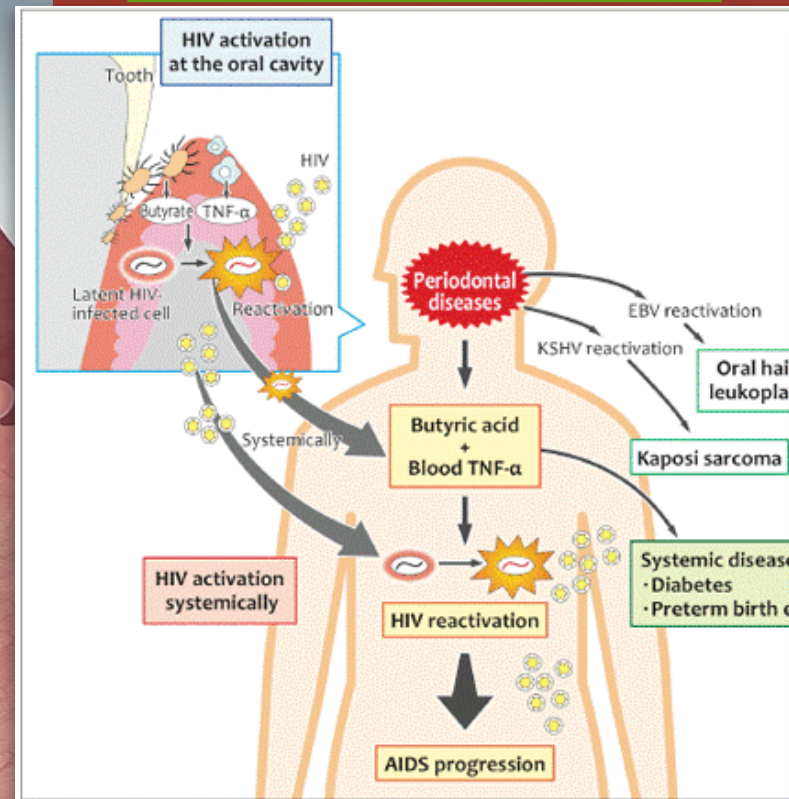
*HIV is transmitted via bodily fluids inside the blood stream and infects the key component of the immune system, including but not limited to the macrophage cells

*Currently there is no cure for HIV however there are medications to suppress the virus and ease symptoms

PLAQUE BIOFILM IN THE MOUTH



REACTIVATION OF LATENT HIV



NECROTIZING GINGIVITIS IN HIV

