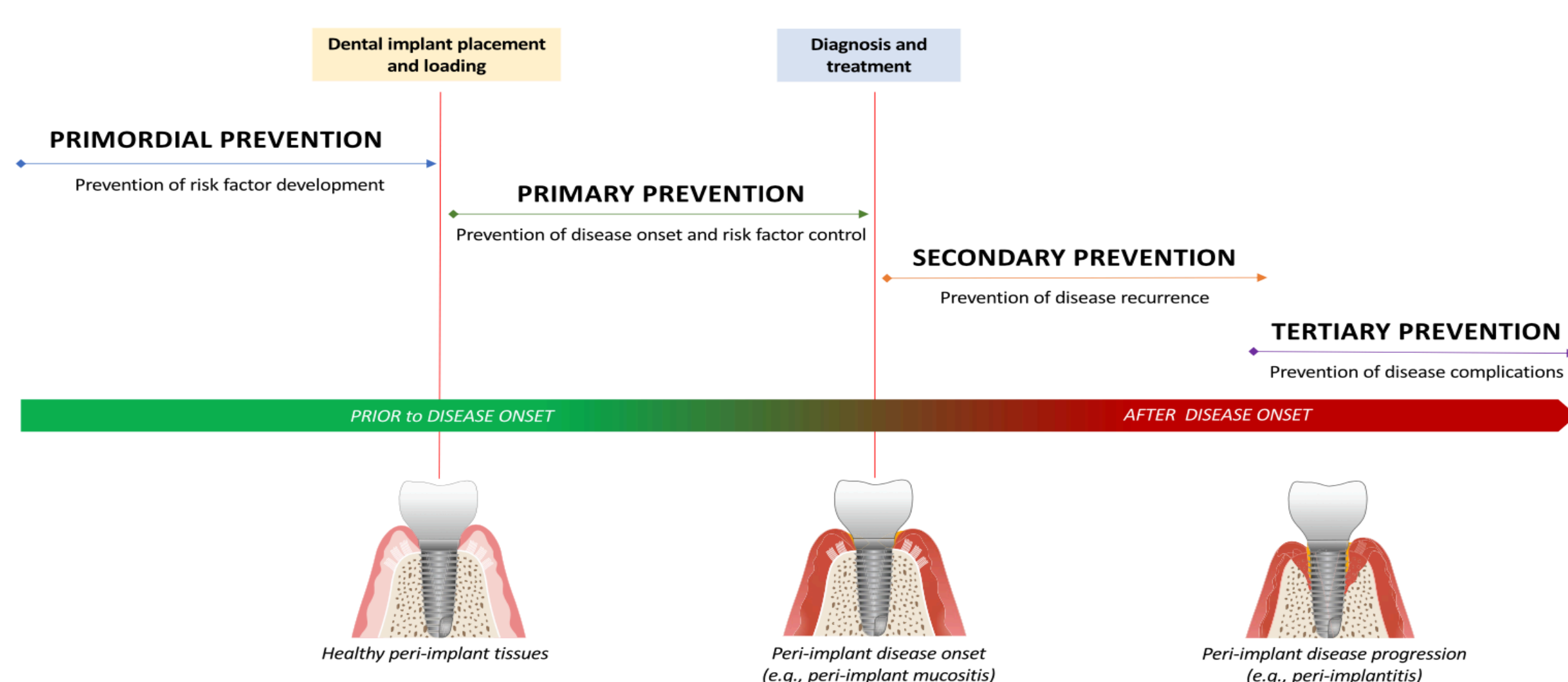


INTRODUCTION

Dental implants are one of the most preferred surgical treatments used for tooth replacement, restorative treatment, tooth function, aesthetics, speech and aid in preservation of teeth and bone. Implants feel and act like a real tooth and can last a lifetime if properly cared for. Despite the high survival rate of dental implants, it is important to understand the different stages of implant failure and its contributing factors. The primary cause of implant failure is from the microorganisms derived from dental biofilms. Bacterial membranes within biofilm, play an important role in the development and progression of peri-implant (Rudeejaraswan, 2023). Dental biofilms develop faster and more rapidly around titanium implant abutments than around natural teeth. There are two stages of implant failure peri-implant mucositis and peri-implantitis. Peri-implant mucositis is the early stage of implant failure, a reversible inflammation that can be found around the implant and resembles gingivitis. The most common cause of peri-implant mucositis is the buildup of plaque at the site of the implant, which can harbor toxin-emitting bacteria that result in the disturbance of the surrounding gingival tissue. This early-stage infection is easier to treat than more advanced peri-implantitis and is also easily prevented through proper oral hygiene and regular dental cleanings (Tecco, 2018). Peri-implantitis is an inflammatory condition that affects the tissue surrounding dental implants and resembles periodontitis. Poor oral hygiene and low quality dental implants can cause inflammation in the gingiva and eventually lead to bone loss structure around implants.

DIFFERENT TYPES OF PREVENTION



ORAL HYGIENE/AIDS

Inadequate biofilm removal is one of the main risk factors in the persistence of mucositis. Oral hygiene is an important element in the prevention of biofilm and peri-implantitis mucositis (Choi, & Kim, E.-J. 2020). To promote the health and longevity of dental implants, routine dental cleaning, oral education, and patient compliance is needed.

Implants Oral Care Aids :

- **Toothpaste** containing **Triclosan** (antibacterial and anti-inflammatory agent)
- **Toothbrushing**- electric toothbrush -mostly recommended
- **Waterpik**- clean areas under and around implants that are unreachable removes biofilm (selective tip depends on type implant)
- **Interdental aid**- proxa brush (plastic)
- **Superfloss**
- **Mouthwash**- removes debris and help keep oral tissue moist and clean.

RISK FACTORS

Factors contributing to implant failure include:

- Oral hygiene behaviors
- Gum disease
- Smoking
- Insufficient jaw bone
- Systemic contributing factors (diabetes)
- Poor placement (cement leakage, open contacts)

ROLE OF DENTAL HYGIENIST

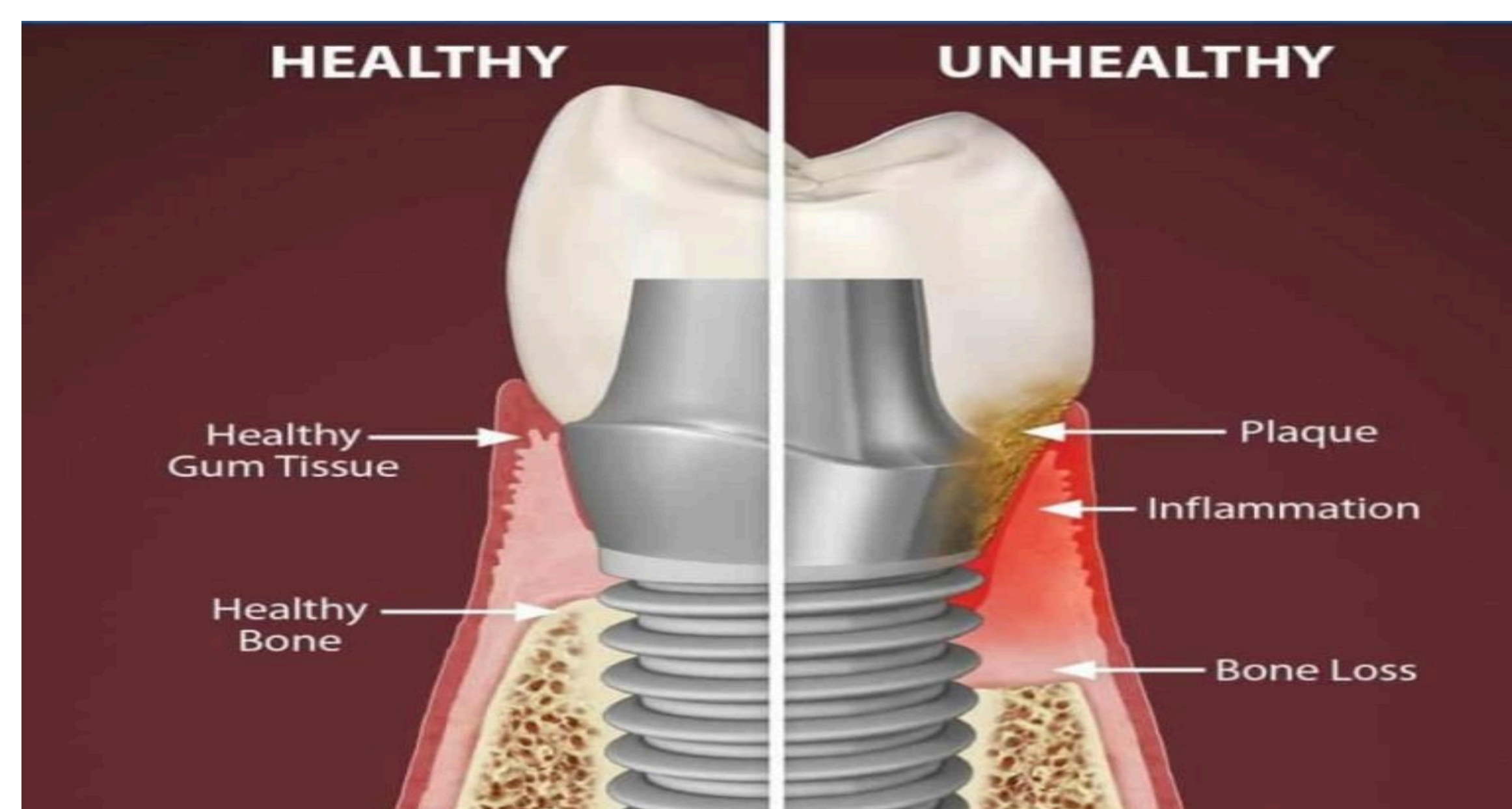
In order to reduce implant failure, a dental hygienist provides patients with essential care and education, assisting in maintaining proper oral hygiene habits and routine professional cleanings. By carefully inspecting the quality of the implant and tissues surrounding it. They recognize any early indications of inflammation, infection, or bone loss (Jongbloed-Zoetetal, 2020). A dental Hygienist removes biofilm and tartar from patients teeth to promote the wellness of the tissue around the dental implants and prevent peri-implantitis. Hygienists recommend oral hygiene implements and empower patients to actively participate in their implants long-term success.

CONCLUSION

People who opt for implants as restorative treatment will need a more dedicated oral hygiene management than those who do not, however, some patients are not aware of this importance and disregard the oral hygiene around the implant. In fact, there are different factors that contribute to implant failure, one being the lack of a proper oral hygiene due to biofilm accumulation. Patients will present with symptoms that can alert them or the clinician and an immediate treatment can be performed to arrest or prevent the failure of the implant (Carra et al, 2023). Therefore, primary prevention has an important role to prevent peri-implant mucositis, of which a patient can be treated and consecutively reversed before becoming peri-implantitis where bone loss is involved. All of this is within the dental professional intervention.



HEALTHY VS UNHEALTHY IMPLANT



REFERENCES

- Carra, Blanc-Sylvestre, N., Courtet, A., & Bouchard, P. (2023). Primordial and primary prevention of peri-implant diseases: A systematic review and meta-analysis. *Journal of Clinical Periodontology*. <https://doi.org/10.1111/jcpe.13790>
- Choi, & Kim, E.-J. (2020). Oral health status of Korean adults with implants according to their use of oral hygiene products: results from a nationwide population-based study (2013–2015). *Journal of Periodontal & Implant Science*, 50(4), 268–277. <https://doi.org/10.5051/jpis.1904700235>
- Rudeejaraswan, Pisanrturakit, P. P., Mattheos, N., Pimkhaokham, A., & Subbalekha, K. (2023). Dentists' Attitudes Toward Dental Implant Maintenance in Thailand. *JDR Clinical and Translational Research*, 8(1), 76–84. <https://doi.org/10.1177/23800844211049405>
- Tecco, Grusovin, M., Sciara, S., Bova, F., Pantaleo, G., & Capparé, P. (2018). The association between three attitude-related indexes of oral hygiene and secondary implant failures: A retrospective longitudinal study. *International Journal of Dental Hygiene*, 16(3), 372–379. <https://doi.org/10.1111/idh.12300>
- Jongbloed-Zoet, C., Nyblom, Y., Bol, E., & Field, J. C. (2020). A standard European curriculum for dental hygiene. *European Journal of Dental Education*, 24(4), 611. <https://doi.org/10.1111/eje.12501>