

The phase contrast microscope in dentistry

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The first phase contrast microscope was built in 1938 by Fritz Zernike, a Dutch physicist and mathematician. The advantage of the phase contrast microscope is to enable the viewing of live microorganisms, in their natural state. Periodontal Disease: Research shows us that Periodontal disease is related to different types of disease related bacteria that is able to survive in the oral cavity. Disease related bacteria in the oral cavity creates infection of the gums. Infected gums creates inflammation. Most illness in our bodies start with inflammation, from one source or another. This makes gum disease/ periodontal disease bi-directional. With the use of the phase contrast microscope, we can evaluate disease related anaerobic bacteria that is able to survive in the oral cavity and throughout our bodies. This creates the Oral Link to Systemic Illness. We will look at 5 different types of anaerobic bacteria and classify 3 different risk level of infection. A video will be provided to demonstrate how to take a bacterial slide and how to evaluate the different levels of disease related bacteria that can be seen with a phase contrast microscope. Periodontal disease is multi-factorial. I will discuss the acronym HONEST AGE. There is a need to understand how Oral Health and Overall Health is needed to be address not only in the dental setting but in a medical setting as well.

Biography

Carol Wells, graduated from Canadore College, North Bay, Ontario, Canada in 1977 with a degree in Dental Hygiene. Graduated with Honors from Expanded Duties Program Toronto Ontario, Canada in 1991. Carol worked in private practice from 1977 till 2007. During my career as a clinical dental hygienist I specialized in a Preventive Dental Hygiene Practice as a Periodontal Co-Therapist. My expertise was in Oral Systemic Health Link with the use Phase Contrast Microscope and the use of the acronym HONEST AGE.

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