

# Dental Lasers- Periodontitis and Endodontic Treatment Lectures

New Orleans, Louisiana

30 December, 2018

The Alpha Omega International Dental Fraternity is pleased to invite Dr. Ayala Stabholz and Dr. Adam Stabholz to discuss the role of lasers in the advanced treatment of periodontitis and endodontic therapy.

## **Prof. Ayala Stabholz**

The Use of Lasers in the Treatment of Periodontitis and Peri-Implantitis: Myth or Reality?

**About the Speaker:** Prof. Ayala Stabholz is an associate professor at the Department of Periodontology at the Hebrew University-Hadassah Faculty of Dental Medicine founded by the Alpha Omega Fraternity. She graduated from the Hebrew University-Hadassah Faculty of Dental Medicine in 1980 and completed the graduate program in Periodontics in 1985 at the same institution.

At present, she is the director of undergraduate training in periodontics as well as an instructor in the graduate program in Periodontology. She is the official delegate of the Israeli Periodontal Society to the European Federation of Periodontology and a member of the scientific committee of the Israeli Dental Association.

**Course Description:** Periodontitis is inflammation of the gums and supporting structures of the teeth. It is one of the most common human diseases. Periodontitis is caused by specific bacteria (known as periodontal bacteria) and by the local inflammation triggered by those bacteria. As the disease progresses, chronic inflammation destroys alveolar bone and teeth to be lost. With careful assessment and treatment, it is usually possible to halt the progress of periodontitis. The key to success is to eliminate the bacterial biofilm triggering the disease process and establish excellent oral hygiene practice. The growing popularity of implant treatments and the increasing number performed in recent years has led to an increased incidence of short-term and long-term complications. One of these complications, which may lead to the loss of implants in the long term is peri-implantitis. Peri-implantitis has been reported to occur in 28%-56% of subjects.

Most therapies proposed today for treating periodontitis and peri-implantitis are aimed at reducing the bacterial load within the periodontal and peri-implant pockets and

decontaminating tooth as well as implant surfaces followed by, in some cases, an attempt to bring about bone regeneration.

Lasers are rapidly becoming an integral part of dental practice.

Multiple wavelengths of lasers and protocols are currently available in treating periodontitis and peri-implantitis. Lasers have been used to treat periodontitis and peri-implantitis, whether with or without flap elevation, as a monotherapy or as an adjunct to mechanical treatments, attempting to decontaminate periodontally affected teeth or failing implant's surfaces.

**Desired Learning Outcomes:**

1. Which laser wavelengths are utilized in periodontal practice.
2. The rationale for using laser technology in periodontal and implant therapy.
3. The use of lasers in non-surgical periodontal treatments – rational and case presentation.
4. The use of lasers in surgical periodontal treatments - rational and case presentation.
5. The use of lasers in peri-implant disease - rational and case presentation.

**Dr. D. Walter Cohen Memorial Lecture**

**Prof. Adam Stabholz**

Er: YAG Laser Supported Endodontic Treatment, Endodontic Retreatment and Endodontic Surgery

**About the Speaker:** Prof. Adam Stabholz was born in Poland in 1948 and immigrated to Israel with his family at the age of two. He completed his compulsory army service, in 1968, with the rank of captain in the Israel Air Force. In 1974 he graduated from the Hebrew University-Hadassah School of Dental Medicine, founded by the Alpha Omega Fraternity and in 1978 he completed the graduate program in endodontics at the University of Pennsylvania in Philadelphia. In 1988, he was appointed Head of the department of endodontics at the Hebrew University-Hadassah School of Dental Medicine, a position he held until last year.

Prof. Stabholz was elected as Dean of the Hebrew University-Hadassah School of Dental Medicine in 1993. In 1996, he was re-elected as Dean for a second consecutive three years term and promoted to the rank of full professor in endodontics.

Prof. Stabholz has published extensively in the dental literature; he is the author of several chapters in endodontic textbooks and has lectured at many international dental meetings. His current research is focused on the application of lasers in dentistry.

**Course Description:** The laser principle will be explained using animation, and the rationale for using laser irradiation in root canal therapy will be discussed.

The presence of biofilm in the contaminated root canal system calls for effective means to enable its removal. Laser irradiation could play a paramount role in the fulfillment of this objective. Use of the EndoLase side firing spiral tip in root canal treatments, developed at the

Hebrew University –Hadassah School of Dental Medicine will be presented. Following its use with Er: YAG laser irradiation in the root canal system, SEM photographs showed clean root canal walls with open dentinal tubules.

Also, the advantage of using the Er: YAG laser to sterilize the bony walls of the crypt following the surgical removal of a periapical lesion will also be discussed.

**Desired Learning Outcomes:**

1. Learn about the use the us the of ER: YAG laser in clinical cases of endodontic treatment, endodontic retreatment, and endodontic surgery, with follow-ups.
2. Learn about the Cervical Invasive Root Resorptin (CIRR) as a clinical entity presenting a considerable challenge to the clinician.
3. Learn about a new treatment approach using Er: YAG laser in the treatment of CIRR.