Advanced Endodontic Laser Course

WANNEER: 25, 26 en 27 mei 2023

- 25 mei: Laser Safety Officer Certification (LSO)
- 26 mei: Lasers & Endodontics
- 27 mei: Lasers in Endo advanced/complicated scenarios & Apical Surgery

WAAR: Praktijk voor Endodontologie Brabant
Provincialeweg 44
5503 HG Veldhoven

KOSTPRIJS: €1.900 excl btw voor 3 dagen
minus €400 voor wie al een LSO certificate heeft
(dan dus enkel 26 en 27 mei)

MEER INFO?
Voor meer informatie kunt u contact opnemen met Rob Oerlemans, Laserspecialist Biolase 06 41856709

Advanced Endodontic Laser Course
Dr. Miguel Martins, PhD M.Sc.

Do you want to become one of the pioneers of Expert Laser use in Endodontics?

This advanced laser Endodontic course welcomes general dentists with special interest for root canal treatments and/or endodontic specialists, which would like to integrate the ultimate endodontic techniques assisted by dental laser(s) in their daily practice.

By using innovative therapy concepts, based on specific laser-tissue interactions, scientific and clinical findings, you will be able to boost your endodontic outcomes, overcoming the limitations and hazardous effects of conventional techniques.

Moreover, you will be able to distinguish yourself from your peers while providing high-standard treatments based in breakthrough technological developments and techniques.

Furthermore, you will be able to create new business potentials and marketing strategies for your dental office, by increasing and broadening your field of expertise.

Curriculum and Course Targets

This course aims to provide theoretical backgrounds, scientific support, clinical indications and skill training (patient demo's possible upon treatments) as integral parts of the *curriculum*.

For such purpose, the latest and advanced endodontic techniques will be presented as integrated parts of this laser-assisted endodontic course.

The biophysical basic interaction concepts and laser safety fundamentals are included in the course program. Thus, the technical steps towards a responsible usage of a laser will be demonstrated.

All laser clinical indications within the field of endodontics (*e.g.* 2780nm Er,Cr:YSGG laser and the 940nm diode laser) will be explained, presented in detail and demonstrated.

You learn all clinical possibilities and indications in the skill training.

By attending this Advanced Certified Course, you will be able to improve patient´s expectations and decrease your work-related stress by increasing your self-confidence and endodontic outcomes.

Content

- We will provide all endodontic materials for pre-clinical RC Treatment (e.g. endodontic files & obturation materials)
- Try different wavelengths and understand the possibilities while combining different lasers.
- Laser Safety Officer & course accreditation(s) by:
  - AALZ – Sigmund Freud Vienna University
  - Portuguese Society for Interdisciplinary Medical Lasers
- Each participant shall bring minimum 3 extracted teeth with access cavity performed (3-D models will be also provided).
- Possibility to upgrade your laser knowledge by enrolling in any of the *Lasers in Dentistry Masterships* - AALZ Sigmund Freud University - worldwide. All fees and contents covered in this advanced laser-endodontic programme will be subtracted.

After successful participation and examination, you will become certified as LSO and endodontic laser expert.

Course Dates & Schedule

Day 1 – LASER SAFETY OFFICER Certification (EN 60825-1)
Day 2 – LASERs & ENDODONTICS
Day 3 – LASERs in ENDO advanced/complicated scenarios & APICAL SURGERY

Location: Praktijk voor Endodontologie Brabant – MECK, Veldhoven (NL)
Gezondheidscentrum het MECK
Provincialeweg 44, 5503HG Veldhoven
https://www.pvebrabant.nl

Day 1
Laser Safety Officer Course (LSO)

One-day course with official certification as a Laser Safety Officer (LSO)

(This course is a pre-requisite for practical laser use)

If fundamental technical, biological and physical information about the application and laser safety measures are not or insufficiently known, laser therapy and medical treatment methods may include risks for both practitioners, their teams and naturally for patients.

We prepare you for safely using lasers by giving you an in-depth understanding of laser physics and laser-tissue interaction. With examples, we clarify the need for safety precautions in the use of lasers in everyday dental practice. We explain statutory regulations, demonstrate their implementation in practice and describe laser application fields. After passing the examination you receive the “Laser Safety Officer” certificate.

Our laser safety courses meet the requirements of the trade associations for obtaining expertise as a Laser Safety Officer. They are officially recognized according to the guidelines of orientated to **EN 60825-1 and ANSI Z136.1**. This course is conceived upon the suggested curriculum of the German regulations OStrV and TROS “Laserstrahlung”.

Content

- Introduction to basic laser physics
- Properties of laser radiation & generation of laser light
- Biological interaction with laser light
- Absorption behaviour of laser light in biological tissues
- Laser parameters and their influence on the tissue interactions
- Hazards of laser light: eye damages and laser safety goggles
- Measures to minimise and mitigate laser risks
- Duties of the LSO (Laser Safety Officer)
- Device safety
- Treatment room safety
- Workspace safety

- Safety checklists

LINK: https://www.aalz.de/laserschutzkurs-nach-ostrv/

Day 2

LASERS IN ENDODONTICS

- Success in Endodontics: debating the need of alternatives to current methods

- Historical context of lasers in endodontics
- Categorizing endodontic success: how far can we go?
- Criteria to evaluate literature results and outcomes;
- Rationale to support laser-assisted endodontic treatments:
  - Limitations of traditional irrigation methods.
- Scientific evidences supporting the use of lasers in endodontics
- Limitations of laser-supported techniques in endodontics

- Laser Biophysical Interactions in Endodontics

- Interaction of different wavelengths with dentine
- Erbium lasers: 2940nm Er:YAG and 2780nm Er,Cr:YSGG lasers
  - Physical and technical backgrounds
  - Concept differences and tips
  - Smear layer removal properties and concepts
  - Disinfection properties and concepts
- Interaction of different wavelengths with aqueous solutions/irrigants:
  - Laser-Induced Cavitation: properties and achievements
  - Laser-Assisted Irrigation
- Technical set-up of different pulse emission patterns and tip-shape profiles
- Evolution, properties, science and clinical features of:
  - PIPS and SWEEPS® (Er:YAG)
  - RFT® (Er,Cr:YSGG)
  - Other techniques
- The 450, 810, 940 and 980nm diode lasers:
  - Biophysical and technical background
  - Selecting the appropriate wavelengths
  - Modes of operation and protocols for endodontic disinfection.
- Combining different wavelengths:

    - Optimizing LAET - the Dual-Wavelength Concept

- Brief introduction and approaches to:
    - Pulp capping & pulpotomies
    - (antimicrobial) Photodynamic Therapies (PDT, aPDT).

– AALZ clinical/practical recommendations: video-demos & pre-clinical training.

Day 3
ENDODONTIC complicated scenarios & APICAL SURGERY

– Managing endodontic complications with lasers

- Overcoming the limitations and hazardous effects of chemical irrigants
    - Laser-assisted Irrigation *vs* laser-assisted endodontics
    - 3-D debris & smear laser removal & disinfection

- Acute and Chronic Apical Periodontitis
    - Laser-induced negative pressure
    - Drainage of apical inflammatory content/suppuration
    - Fistulas' approach
    - Large apical periodontitis / cysts-like lesions

- Intricate Root Canal Anatomies:
    - Debriding and cleaning challenging root canal systems and morphologies
    - Isthmuses

- Rationale for Laser-Assisted Re-treatments
    - Removal of sealers and gutta-percha
    - Deep disinfection

- Open Apexes and Apical Resorptions

- Endodontic Traumatology:
    - Dentin hypersensitivity
    - Root Fractures
    - Internal, External and Invasive cervical resorptions

- Dealing with Iatrogenic Damages:
    - Furcation damage
    - Perforations
    - Ledgings
    - Broken files
    - Apical extrusions
    - "Unbelievable" clinical scenarios

- Root Canal Sclerosis/calcifications

- **Laser-Assisted Endodontic MicroSurgery (Laser Apicectomy)**
    - Introduction to the benefits of using lasers in endodontic apical surgery
    - Properties of different wavelengths
    - The use of Erbium lasers for:
        - Incision, bone ablation, granulation tissue removal, apicectomy, retro-preparation, bone cavity and canal disinfection, suture bandage and Low-Level Laser Therapy (LLLT or PBMT).

- **Examination & Certification**
    - Discussion (30min)
    - A written exam of 60min duration will be held at the end of the course.
    - The exam is conducted subsequently to the lectures.