



**SAVEETHA DENTAL COLLEGE & HOSPITALS.**  
**162, Poonamalae Road, Chennai-77**



**MS- ORAL BIOLOGY**  
**3 YEARS – PG PROGRAM**

## **MS - ORAL BIOLOGY (BIOLOGICAL DENTISTRY)**

**- An Integrative Biologic Dental Medicine Approach**

### **MS Program:**

The Department runs several well-structured Programs which are designed for the most advanced curriculum in the country be it academic, clinical and research. The oral Biology course offers a unique combination of tissues and functions of the mouth and craniofacial complex. This Program is an Integrative Biologic Dental Medicine Approach which specializes in (Whole health Dentistry) Biological Dentistry. It is alternative approach in the field of dentistry, Practice of diagnosing, preventing, treating, and maintaining oral health using natural therapies. The health of your mouth plays a significant role in the health of your body. This program has multi-factorial curriculum blending both didactic and clinical training for immediate integration into your daily practice.

### **Overview:**

Biological dentistry is the practice of diagnosing, preventing, treating, and maintaining oral health using natural therapies. It offers whole-health dentistry procedures that don't use toxic or dangerous substances when treating cavities, gum disease, and other oral health conditions. It takes into account how oral health affects systemic health. Assessment of patient's entire state of physical and emotional health is done before deciding on treatments. It understands that the

mouth and body are connected and that illness or disease that occurs inside the body is reflected orally and vice versa. Factors like stress, diet, and sleep patterns have a direct impact on oral inflammation and disease. Prevention and early detection through Biological dental care are the keys to lifelong health.

## **GOALS:**

1. Course will offer a general understanding of the biology of the oral cavity and developing craniofacial region and the interactions between oral and systemic health.
2. Will enhance knowledge in Integrative Biological Dental Medicine Approach.
3. Will provide substantial depth to the clinical degree, including a broad understanding of biological dentistry and alternative clinical therapies.
4. Will enhance Knowledge in whole health dentistry and Custom Tailor dental care that fit unique Fit health need.

## **OBJECTIVES:**

The objective of the program is to enable the students to become critical thinkers and evaluators of best practices in dentistry.

To ensure higher knowledge and competence in the following areas of Biological Dentistry.

- Biology of Oral Tissues
- Oral MICROBIOME Testing
- Mercury free & Mercury Safe
- Ozone therapy
- Minimal invasive dentistry
- Biocompatible Treatments
- Oral and Systemic Health
- Biological Endodontics
- Safe Amalgam removal Protocol
- IV Protocol
- Oral Neural Therapy

# **TREATMENT APPROACHES IN BIOLOGICAL DENTISTRY:**

## **1. ORAL MICROBIOME TESTING:**

Oral Micro biome Testing is a simple way to check for certain risk factors that contribute to oral diseases like gum disease and tooth decay, plus identify whether you are at increased risk for other important health issues like heart disease, stroke, diabetes, pregnancy complications, oral cancer, and inflammation.

## **2. SAFE MERCURY REMOVAL**

**(MERCURY FREE AND MERCURY SAFE)**

- Mercury free - **No amalgam** or other mercury products in new restorations
- Mercury safe – Rigid **protocol to prevent mercury exposure** and environmental pollution when removing amalgam

### **PROTOCOL:**

The common technique for replacing a filling is often referred to as “drill and fill.”

The old filling is amalgam, that approach releases alarming amounts of mercury vapor and particulate matter. Therefore a stringent mercury safe protocol is followed , which includes:

- A breathing mask delivers a clean air supply and filters out the mercury
- A rubber dam is used to isolate teeth from the rest of the mouth, so you don't contact or swallow particles
- Two specialized suction devices are used to collect larger pieces of mercury and direct the vapor straight to an air filter

### **3. OZONE DENTAL TREATMENT:**

Ozone therapy is non-toxic, completely natural, and perfectly safe. It uses ozone molecules (O<sub>3</sub>) in gas, oil or liquid form to disinfect dental tissues and stop infections from spreading. It is one of the most versatile tools that help patients restore their oral health.

Antibacterial properties of ozone are used to treat a number of oral health problems, including:

- Mercury-safe dentistry – As part of the amalgam removal process, ozone helps to detoxify the body.
- Dental caries – Ozone kills cavity-causing bacteria and reverses early decay, often avoiding drilling and filling.
- Gum disease – Sanitizing periodontal pockets and root surfaces helps to avoid bacterial re-invasion.
- Tooth and bone infection – Ozone boosts the body's immune response.
- Soft tissue abscesses and ulcerations – Ozone brings fast relief from cold and canker sores.
- Extraction – Ozone cleanses the socket and stimulates the body's natural ability to heal by increasing localized circulation.
- Sensitivity – Ozone helps to harden compromised tooth structure, reducing sensitivity from acid erosion or soft enamel. It also hardens root surfaces exposed by gum recession
- TMD - Relief of systemic medical conditions, such as chronic fatigue, irritable bowel syndrome (IBS), insomnia, rheumatoid arthritis, and Meniere's disease  
Improved mood ,Less anxiety and worry ,Relief of tinnitus (ringing in the ears) & Relief of dizziness caused by fluid accumulation or other issues within the inner ear

## **4. BIOLOGICAL ENDODONTICS:**

### **>Biolase Waterlase Laser:**

- This tool precisely combines water and laser energy to remove hard and soft tissue and bacteria. It is a silent process that creates no heat or noise and is completely safe for use on children and adults. During a root canal, the laser is used to disinfect the targeted area. It can also be used to remove general decay and in soft tissue and surgical procedures.

### **>Bio-compatibility testing:**

A blood test or muscle test that helps determine the most compatible filling material for your body

**>Cone Beam Scanner** - 3D visualization of the teeth and surrounding tissues – allowing us to diagnose any persisting infections and to map out root canals.

**>Integration of the Laser and ozone** - Tubules within a tooth can be disinfected to the fullest, eliminating the harmful bacteria.

## **5. IV PROTOCOL (Integrative Medicine and Dentistry)**

IV Vitamin C therapy has demonstrated positive effects. The ascorbic acid drastically reduces discomfort and pain experienced by patients while improving healing and significantly enhancing recovery time. Through a high-dose vitamin C infusion, the vitamin C does not have to be absorbed by the intestinal mucosa first but enters the blood system directly. Individuals with reduced intestinal absorption capacity greatly benefit from this.

### **Detox procedures utilizing IV protocols and IV Chelation**

Old mercury-based restoration, an **IV-C can help chelate** (loosen the bonds) residual mercury from the bonding site as well as act as a heavy-metal detoxification agent during removal.

IV-C can also provide **rapid recovery** for patients **experiencing painful dry socket** after a tooth extraction, or even prevent it if administered during extraction

### **IV Therapy using Vitamin C during Mercury Amalgam Removal**

Mercury is a powerful oxidant and the use of IV Vitamin C during mercury amalgam removal can be very beneficial. Safe mercury amalgam removal is performed at the Holistic Dental Center following the SMART protocol and for an additional level of protection; we offer the ability to have a Vitamin C Infusion during treatment. Since Vitamin C is a potent antioxidant, it can assist in preventing any free-radical formation in addition to boosting the immune system.

### **IV Infusions for Oral Surgeries and Safe tooth extraction**

An infusion is administered intravenously the day prior, during the dental surgery, and for two days following the procedure. The IV infusion is a combination of Vitamin C, anti-inflammatory vitamins, B12, D, and E. All have demonstrated anti-inflammatory properties, aiding in both recovery and wound healing.

In addition, IV antibiotics are used. Unlike oral antibiotics, the IV antibiotics bypass the gut avoiding disruption and damage to the gut flora keeping it healthy, and reducing a need for supplemental probiotics.

While IV antibiotics are administered directly into the bloodstream, the combination of vitamins—particularly Vitamin C is inherently utilized by the body to make more connective tissue, thus naturally boosting healing and recovery time.

IV Vitamin C therapy to boost their immune system as well as the use of a PEMF ( Pulsed Electromagnetic Field Therapy), which has been reported to produce anti-inflammatory and bone-healing effects by decreasing the production of free radicals and stimulating osteoblasts during any surgical procedure which assist in healing and recovery.

## **6. NEURAL DENTAL THERAPY**

Neural therapy doesn't directly treat the nervous system; it influences the function of nerves. It's a holistic therapy designed to elicit a positive response from the nervous system.

Neural therapy helps restore a normal electrical flow along nerve channels to your muscles, organs or any other part of your body. This normal electrical flow is essential for proper function and optimal health. When this flow is interrupted, long-term illness and pain are often the result.

It is an alternative medicine treatment that consists in the application of a medicine (Procaine) in points of the temporomandibular joint TMJ and in muscular planes; it aims to stimulate natural and neural mechanisms of healing of the organs.

## **7. BIOCOMPATIBILITY TESTING**

### **CLIFFORD MATERIALS REACTIVITY TESTING (CMRT):**

- A test that is recommended for patients who have many sensitivities to chemicals in general or who have had dental work done in the past and feel like their body is reacting.
- This test is performed with a blood draw and is sent to the testing lab. A report is then sent back to the patient.
- Results will include list of materials that may be 'suitable or 'not suitable' for the patient. This report is very complete with over 170 pages of most dental material and brands.

