

## **LOCAL ANESTHESIA & NITROUS OXIDE ANALGESIA COURSE FOR DENTAL HYGIENISTS**

*ULSD Office of Continuing Education, Room 123P  
501 S. Preston St. Louisville, KY 40202  
502-852-5077 telephone; 502-852-3994 fax;  
[www.louisville.edu/dental/continuingeducation](http://www.louisville.edu/dental/continuingeducation)*

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**Supporting Staff:** **Douglas D. Wilson, Clinical Support**  
**Cindy Johnson, Clinical Support**

**CE Office:** **W. Michael Mansfield, Director**  
**Elizabeth Hopkins, Office Coordinator**

**Required Text:** **Malamed, S.F., Handbook of Local Anesthesia, 5<sup>th</sup> ED., C.V.,  
Mosby Co., St. Louis, MO 2004**

**Referenced Text:** **Evers, H., Haegerstam, G., Introduction to Dental  
Local Anesthesia, Astra, 1990**

### **Course Overview:**

This course is designed to provide the dental hygienists with the knowledge and skills necessary to effectively administer block and infiltration anesthesia, as well as nitrous oxide analgesia. The course will include classroom, laboratory, and clinical instruction. Participants will work in groups of two or three and administer local anesthesia and nitrous oxide analgesia on each other.

Kentucky Board of Dentistry has approved this course for 46 CEUs. Upon successful completion of this course, participants will have completed the educational requirements for local anesthesia and nitrous oxide credentialing in Kentucky (201 KAR 8:460)

Course is limited to 12 participants. Payment holds a participant spot.

### **Course Objectives:**

Upon completion of this course, participants should be able to:

1. Describe the physiological mechanism of nerve conduction and how local anesthetic agents prevent impulse transmission.
2. Locate hard and soft tissue landmarks associated with the various local anesthetic injections.
3. Describe the neuroanatomy of the trigeminal nerve.
4. Identify and assemble the armamentarium necessary for the administration of local anesthesia.
5. Demonstrate correct use of local anesthetic armamentarium.

6. Identify nerve, teeth, and soft tissue structures anesthetized with specific injections.
7. Perform a physical and psychological evaluation with emphasis on patients to receive local anesthesia.
8. Discuss the pharmacology of local anesthetic agents and vasoconstrictors commonly used in dentistry.
9. Calculate the maximum safe dose of local anesthetic agents and vasoconstrictors for individual patients.
10. Describe local and systemic complications that may occur with the administration of local anesthesia.
11. Discuss the management of local and systemic complications that may occur with the administration of local anesthesia.
12. Safely and effectively administer anterior superior alveolar, middle superior alveolar posterior superior alveolar, nasopalatine, greater palatine, inferior alveolar/lingual, long buccal, and mental nerve injections.
13. Differentiate between anesthesia and analgesia.
14. Describe the four stages of Guedel's Classification for anesthesia.
15. Discuss the pharmacology of nitrous oxide/oxygen conscious sedation.
16. List the beneficial and adverse effects of nitrous oxide/oxygen conscious sedation.
17. Identify the contraindications for nitrous oxide/oxygen conscious sedation.
18. Identify and demonstrate the use of equipment/armamentarium for nitrous oxide/oxygen conscious sedation.
19. Describe the three phases in administering nitrous oxide/oxygen conscious sedation.
20. Safely and effectively administer nitrous oxide/oxygen conscious sedation.

**Course Requirements:** All participants must present a copy of current license, a valid CPR card (**front & back**) and **proof of individual liability insurance; specifically – Insurance Coverage that includes coverage as a participant in a Nitrous Oxide Administering and Local Anesthesia Administration Continuing Education course.**

**Questions regarding the aforementioned insurance may be directed to:**

1. Marsh Affinity Group Services “Seabury & Smith”  
1440 Renaissance Drive  
Park Ridge, IL 60068  
800-503-9230
2. CNA/Healthcare Providers Insurance  
159 East County Line Road  
Hathoro, PA 19040-1218  
800-982-9491

In addition, each participant will be required to complete a current medical history form (forms will be provided by the University of Louisville School of Dentistry). Attendance for all class, laboratory and clinical sessions is **required**. Completion of assigned readings from the assigned textbook is expected prior to each class. A definitive review of injection sites and techniques will be further developed through the use of lecture, videotapes, and hands-on exercises. *It is suggested that you wear scrubs or casual business attire. No open-toed shoes are permitted in the course*

Please note that participants must provide their own protective eyewear. Each participant will be expected to be both an operator and patient, unless a medical condition precludes the safe administration of local anesthesia. If you are unable to participate as a partner during the clinical portion, you must provide a replacement.

Each participant is expected to professionally contribute to the course. This is demonstrated by attending class, being on time, being prepared (coming to class with an awareness of the subject under discussion, wearing appropriate clinical attire, appropriately disinfecting, setting up and breaking down the operatory, following required infection control guidelines, evaluating medical histories of clinical partners, recording legal progress notes, etc.) and contributing to the class discussion.

Each participant must demonstrate competent administration of nitrous oxide sedation and local anesthesia for each of the stated injections according to state regulations. Each participant must successfully complete a comprehensive written examination covering coursework and clinical training in local anesthesia. **A score of 75 or better is required.**

Note: Cellular telephones, pagers and all other electronic devices must be “**turned off**” during class time!

### **ELIGIBILITY AND REQUIREMENTS:**

- ❖ A copy of current license to practice dental hygiene
- ❖ Proof of liability insurance coverage for the Local Anesthesia and Nitrous Oxide Analgesia course
- ❖ A copy of current Health Care Provider CPR certification (front and back)
- ❖ Participants should provide own protective eyewear
- ❖ Attendance for all class, lab, and clinic sessions is **required**
- ❖ Required Text: Handbook of Local Anesthesia, 5<sup>th</sup> edition, by Dr. Stanley Malamed; ISBN# 0-323-02449-1. The book is available through the U of L Health Science Book Store (852-5284) for \$56.95. The text is also available through the following sites: [www.amazon.com](http://www.amazon.com); [www.bn.com](http://www.bn.com); [www.bookstore.wku](http://www.bookstore.wku). and other bookstores.
- ❖ Fax or mail to ULSD:  
*ULSD Office of Continuing Education, Room 123P  
 501 S. Preston St. Louisville, KY 40202  
 502-852-5077 telephone; 502-852-3994 fax*
- ❖ **The above items are due three (3) weeks before class!**

### **CANCELLATION AND REFUND POLICY FOR LIMITED ATTENDANCE COURSES:**

Cancellations received less than two weeks prior to the date of the course, will result in the forfeiture of the registration fee or deposit.