

COURSE NAME : 60.20 Orthodontic Bonding**COURSE DESCRIPTION :****60.20 Orthodontic Bonding Courses**

The Orthodontic Bonding Course is actually 9 smaller courses where each one focuses on a special topic about bonding. The run time for the presentation and the number of Knowledge Quiz questions are listed under each smaller course.

This full course trains the individual to be an expert in orthodontic bonding and explains why the methods that are taught are the best that are known at this time. The learner must pass all 9 smaller courses to develop expertise and earn the full **20** credits of the Orthodontic Bonding Course. Individuals who have learned the important concepts from this course will pass state and national exams on bonding and also know how to successfully complete a full bonding second molar to second molar in one appointment.

This is the only orthodontic training program of its kind with multimedia movies demonstrating each step of a procedure, detailed checklists that list each step of a procedure, and also specify the standard of quality to be achieved for the successful completion of a procedure.

The nine sub-courses of the Orthodontic Bonding Course are:

60.21 Orthodontic Bonding Introduction**60.22 Bonding-Chapter 1-Benefits, 2-Criteria, 3-Bracket Identification, 4-Bracket Components****60.23 Bonding-Chapter 5-How do braces move teeth, Chapter 6-Preparing teeth for Bonding****60.24 Bonding-Chapter 7-Adhesion Enhancers, Chapter 8-Sealants, Chapter 9-Adhesive Pastes****60.25 Bonding-Chapter 10: Sequence of Bracket Placement****60.26 Bonding-Bracket Placement and Final Positioning for Ideal Alignment and Function****60.27 Bonding-Chapter 11-Bonding Difficult Areas, Chapter 12-Bond Troubleshooting, Chapter 13-Rebonding****60.28 Bonding: Chapter 14-Bonding to Composite, 15-Bonding to Porcelain, 16-Bonding to Metal****60.29 Review Course-Orthodontic Bonding Second Molar to Second Molar**

Goal of the Orthodontic Bonding Course is to help the student learn all about orthodontic brackets, preparation of the teeth for bonding brackets, materials used in bonding, precise steps in placing brackets on the teeth, removing flash, having the orthodontist check positioning, curing bonding adhesive, bonding difficult areas, solving problems associated with bonding, bonding to special surfaces, and bonding second molar to second molar in one appointment. The goal is to train the orthodontic assistant to be an expert in orthodontic bonding.

Objectives: At the conclusion of this Orthodontic Bonding Course the student will be able to:

1. List the seven benefits of properly bonded and positioned brackets
2. List the 8 criteria for properly bonded brackets
3. Demonstrate identification of different brackets
4. List and describe the 13 components of brackets
5. Describe 3 ways braces move teeth
6. Describe how to prepare teeth for bonding
7. Describe the use of adhesion enhancers
8. Describe the use of sealants
9. Describe the general characteristics of adhesive pastes
10. List the correct steps in placement of brackets
11. Describe different types of curing lights and curing times
12. Describe a sequence of bracket placement that allows minimal contamination
13. Discuss the analysis and solutions to different bonding problems

14. Describe how to rebond a bracket
15. Describe how to bond to composite restorations
16. Describe how to bond to porcelain
17. Describe how to bond to any metal surface
18. Conduct bond-failure charting to determine the factors that are contributing to bond failure and corrective measures

9 Sub-courses of the Orthodontic Bonding Course

This Orthodontic Bonding Course teaches every detail about orthodontic bonding of brackets properly so that they remain attached to the teeth in the correct position. It has the following sub-courses:

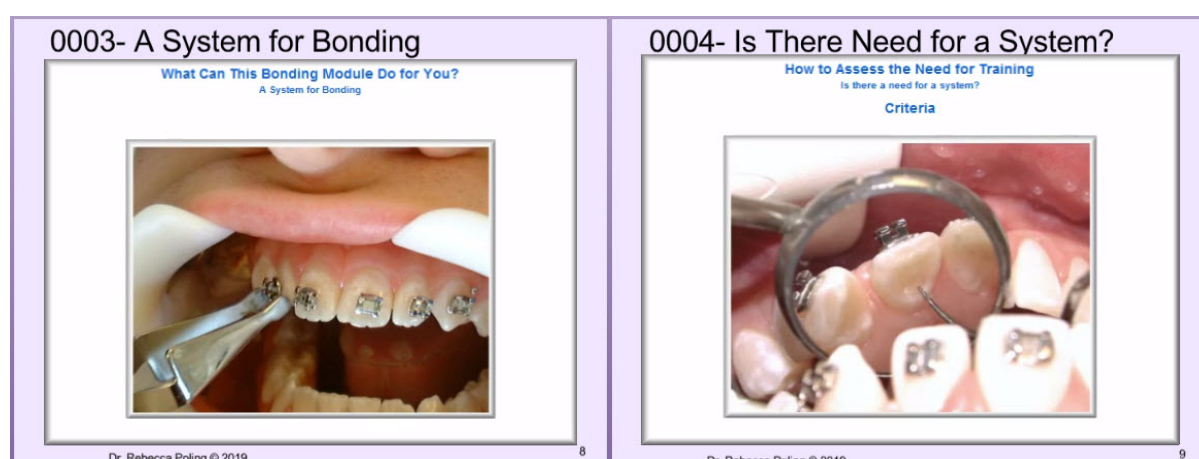
60.21 Orthodontic Bonding Introduction

Presentation: **15 minutes** Run Time, Knowledge Quiz: **3 Questions, 1 CE Credits**

Does the orthodontic practice need a system of bonding that all orthodontic assistants follow for maximum office efficiency? This introduction helps the doctor and the team determine if a system is needed by covering these topics:

- a. Welcome to Orthodontic Bonding and Objectives of the Module
- b. How This Module Was Made
- c. A System for Bonding
- d. Is There Need for a System?
- e. Measurement of Bond Failure Percentage
- f. Analysis of the Problem
- g. Setting Practice Goals
- h. Using the Orthodontic Bonding Module for Team Training
- i. Clinical Training Using ITI Product and Performance Checklists
- j. Training Tracking
- k. Measurement of Achievement of Goals
- l. Re-Measurement of Bond Failure Percentage

This introduction helps the practice get the most out of the Orthodontic Bonding Course by tailoring necessary learning to the needs of the practice.



0006- Analysis of the Problem

Training with the Orthodontic Bonding Module

Analysis of the Problem

Set Goals

1. OCTOBER

2.

3.

4. Original Brackets This Month

5. Replaced Brackets This Month

6. Total Brackets Placed This Month

7.

8.

9. Total percentage of replaced brackets

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

21.

22.

23.

24.

25.

Cost estimate

Total this month

75

22

\$ 200.00

\$ 5,400.00

102

28%

Original Brackets This Month

Replaced Brackets This Month

Total Brackets Placed This Month

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REVIEW

- What are the objectives of the Orthodontic Bonding Course?
- What is a system for bonding?
- Is there a need for a system?
- How do you measure Bond Failure Percentage?
- How do you analyze a problem you might be having?
- How do you set Practice Goals for improved bonding?
- How do you use the Bonding Course for team training?
- How do you conduct clinical training using Checklists?
- How do you track training and learning?
- How do you measure achievement of Practice Goals?
- How do you re-measure Bond Failure Percentage?

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60.22 Bonding-Chapter 1-Benefits, 2-Criteria, 3-Bracket Identification, 4-Bracket Components

Presentation: 33 minutes Run Time, Knowledge Quiz: 33 Questions, 2 CE Credits

These first four chapters of the Orthodontic Bonding Course cover the benefits and criteria of properly bonded brackets as well as bracket identification and bracket components. The orthodontic assistant must appreciate and understand the benefits of having properly bonded brackets. The orthodontic assistant must know the criteria of properly bonded brackets and also be able to recognize when a bonded bracket is not positioned correctly and causing unnecessary problems. The trained orthodontic assistant is an extra set of eyes and ears for the doctor to become aware of potential problems. This member of the team must be able to identify brackets to sort them after sterilization and to recognize the features of different types of brackets in order to select the best brackets to use to accomplish the goals of the treatment plan.

0101- Benefits of properly bonded and positioned brackets

BENEFITS

Benefits of Properly Bonded and Positioned Brackets

- Bonds will stay on the teeth and withstand various pressures better.
- A more predictable and efficient schedule will be established.
- Teeth and roots will be aligned ideally.
- Hygienically-placed brackets have less plaque, decalcification, decay, and gingival inflammation.
- Properly etched teeth have less potential for decalcification.
- The patient will be more comfortable biting together.
- Bracket removal will be easier with restoration of the teeth to a high shine.

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0201- Criteria for properly bonded brackets

CRITERIA

Criteria for Properly Bonded Brackets

- Use the correct bracket for each specific tooth.
- Bracket pad fits the contour of the tooth.
- Bracket pad is flush with the tooth.
- The tooth is etched and sealed properly.
- Bracket is positioned ideally.
- All visible flash is removed.
- The patient is not occluding on the bracket.
- The bracket stays bonded to the tooth.

Bonding

Criteria Checklist

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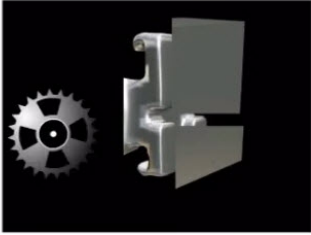
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0301- Bracket Manufacturing Processes

BRACKET IDENTIFICATION

Bracket Manufacturing Processes

The machine is programmed to carve the shape, angle, slot size, torque and other features



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0401- General Components

COMPONENTS OF A BRACKET

General Components

Wire slot size

Torque

Angle

Tie wings

Base


Pad

Hooks

Identification mark

Positioning scribe line

Special features



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60.23 Bonding-Chapter 5-How do braces move teeth, Chapter 6-Preparing teeth for Bonding

Presentation: 47 minutes Run Time, Knowledge Quiz: 15 Questions, 4 CE Credits


Chapter 5 presents basic information about how braces move teeth so that the orthodontic assistant will understand moving teeth through bone such as in extraction cases, sutural expansion with hyrax expanders, and alveolar “bending” which may have more potential for relapse and require active retention.

0501- Moving Through Bone

HOW DO BRACES MOVE TEETH?

MovingThrough Bone

Cause the teeth to move through bone



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0502- “Bending” Bone

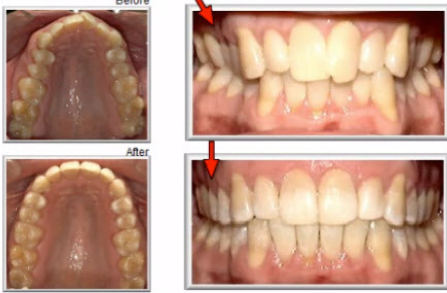
HOW DO BRACES MOVE TEETH?

Bending Bone

Unstable and relapse

Before

After



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Chapter 6-Preparing teeth for Bonding

0602- Steps

PREPARING TEETH FOR BONDING

Steps

Steps in preparing the teeth for bonding

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0603- Sources Of Contamination

PREPARING TEETH FOR BONDING

Sources of Contamination

Probably the most frequent cause of bond failure

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0606- Video - The Great Lakes Dry Field System

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0617- Video - Preparation Of Teeth For Bonding

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60.24 Bonding-Chapter 7-Adhesion Enhancers, Chapter 8-Sealants, Chapter 9-Adhesive Pastes

Presentation: **35 minutes** Run Time, Knowledge Quiz: **11 Questions**, **2 CE Credits**

This sub-course trains the orthodontic assistant in all of the adhesion enhancers, types of sealants, and bonding adhesive pastes available for orthodontic bonding from the major manufacturing companies. It also has a section on curing lights and curing times.

0801- Unfilled Resin Sealant

SEALANTS

Unfilled Resin Sealant

Sealant used in orthodontic bonding

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0803- Video - Sealant Placement

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0901- General Characteristics of Adhesive Pastes

ADHESIVE PASTES

General Characteristics of Adhesive Pastes

Flash is difficult to remove

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0909- Curing Lights

ADHESIVE PASTES

Curing Lights

Most commonly used curing light is the halogen

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60.25 Bonding-Chapter 10: Sequence of Bracket Placement

Presentation: **31 minutes** Run Time, Knowledge Quiz: **11 Questions**, **2 CE Credits**

This sub-course teaches a sequence of bracket placement that minimizes saliva contamination during this appointment. This method also balances the positions of the brackets on the right and left for symmetry. It assures sufficient removal of flash to prevent staining and decalcification around the bracket. After the trained orthodontic assistant has placed and preliminarily positioned all of the incisor and canine brackets, the doctor does a quick check of the positioning and gives the OK to light cure the anterior brackets, the assistant then light cures these anterior brackets.

1001- Selecting and Organizing Brackets

SEQUENCE OF BRACKET PLACEMENT
Selecting and Organizing Brackets to be Bonded

Mandibular left molar brackets are placed on the lower right

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1004- Placement of Brackets onto Anterior Teeth

SEQUENCE OF BRACKET PLACEMENT
Placement of Brackets onto Anterior Teeth

Within a half-millimeter of the bracket's final position

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1005- Final Positioning

SEQUENCE OF BRACKET PLACEMENT
Final Positioning

The orthodontist does final positioning

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1006- Video - Placement of Anterior Brackets

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Next, it is most efficient to place the lower right brackets on the posterior teeth starting with the lower right second molar, then the lower right first premolar, lower second premolar, and lower right first molar. Then the lower left second molar is placed and positioned, then the lower left first premolar, left second premolar, and lower left first molar. All of these brackets are precisely positioned, removing all flash and doing a final press down. The doctor then checks the positions of all of the lower posterior brackets and gives the go ahead to light cure all.

1008-Video-Placement of Mandibular Posterior Brackets

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Finally, the upper left second molar is laid on the tooth, pressed, flash removed, and final positioning completed. This way, one does not have to work around a bracket that has already been placed on the upper left first molar. Next, the upper left first premolar, second premolar, and upper left first molar are all laid on their teeth, pressed, flash removed, and final positioning done. Then the upper right posterior brackets are placed following the same sequence as was done on the upper left. After all upper posterior brackets are positioned, the doctor checks, makes adjustments if needed, and gives the go ahead for light curing and removing the retractors.

1009-Video-Placement of Maxillary Posterior Brackets

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1007- Placement of Brackets onto Posterior Teeth

SEQUENCE OF BRACKET PLACEMENT
Placement of Brackets onto Posterior Teeth

Remove flash without moving the bracket

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1003- Bracket Placement

SEQUENCE OF BRACKET PLACEMENT
Bracket Placement

Place the bracket onto the tooth where it will be attached

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1010- Removal of Cheek Retractors

SEQUENCE OF BRACKET PLACEMENT
Removal of Cheek Retractors

Remove the cheek retractors
Check for brackets interfering with occlusion

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This method of bonding is an efficient use of the doctor's time which is usually the efficiency-limiting factor in a busy orthodontic practice.

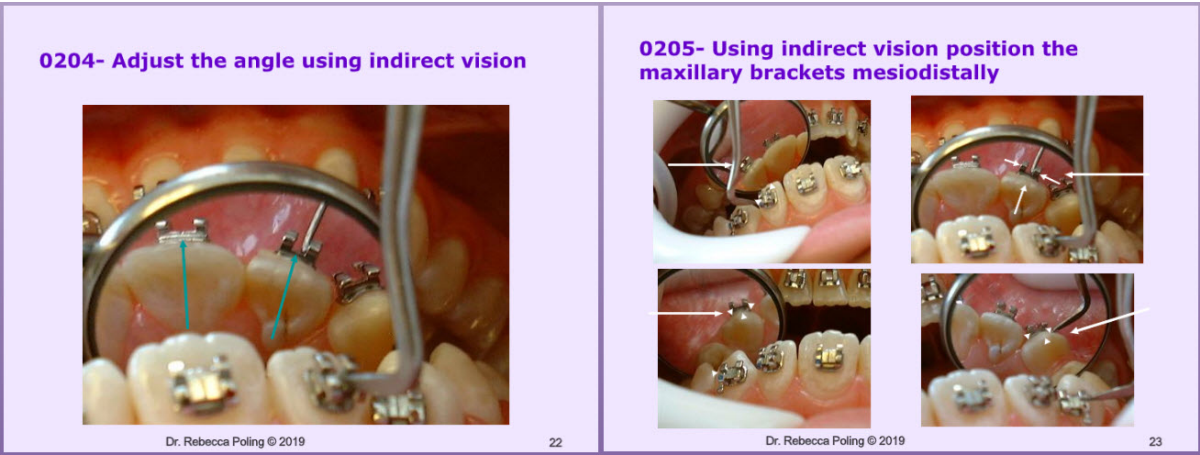
60.26 Bonding-Bracket Placement and Final Positioning for Ideal Alignment and Function

Presentation: 35 minutes Run Time, Knowledge Quiz: 32 Questions, 3 CE Credits

This sub-course trains the orthodontic resident and orthodontic assistant in a standardized, comprehensive method of placing and positioning brackets. It is based on years of critically evaluating bracket positioning after treatment when cases were completed to determine if there were trends in the outcomes I was observing. In dental school, I had extra instruction in ideal occlusion and function, which then influenced me in evaluating my treatment results. The concepts presented in this course also influenced an article I wrote (A Method of Finishing the Occlusion) that was published in the AJO in May, 1999.

Some orthodontists do not think orthodontic assistants should learn this material. I trained many orthodontic assistants over the years and all of them performed detailed positioning well. I would always check the bracket positions before the assistant light cured the brackets just to be sure. I paid my assistants very well for excellent performance. In return, my assistants knew that they were important members of our practice team.

Positioning Maxillary and Mandibular Anterior Brackets



60.27 Bonding-Chapter 11-Bonding Difficult Areas, Chapter 12-Bond Troubleshooting, Chapter 13-Rebonding

Presentation: 46 minutes Run Time, Knowledge Quiz: 32 Questions, 3 CE Credits

Chapter 11-Bonding Difficult Areas trains the orthodontic assistant to recognize when bracket bonding will be difficult and then to use special techniques when bonding in these challenging situations.



Chapter 13-Rebonding Brackets trains the orthodontic assistant to rebond a bracket using a microetcher or rebonding using plastic conditioner.



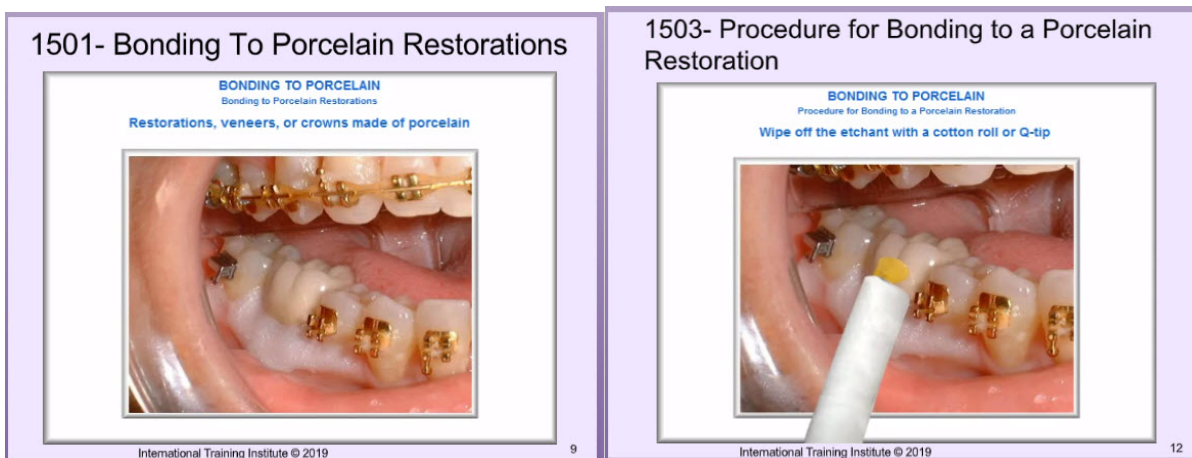
60.28 Bonding: Chapter 14-Bonding to Composite, 15-Bonding to Porcelain, 16-Bonding to Metal

Presentation: 18 minutes Run Time, Knowledge Quiz: 7 Questions, 1 CE Credit

Chapter 14-Bonding to Composite trains the orthodontic assistant to bond brackets so that they adhere to composite restorations.



Chapter 15-Bonding to Porcelain trains the orthodontic assistant to bond brackets so that they adhere to porcelain restorations. Porcelain etchant is highly caustic and should only be used by experienced individuals who are familiar with the danger of this agent. Neutralizing solution should be available whenever this etchant is used. Also, the patient should give informed consent before this etchant is placed on the porcelain surface.

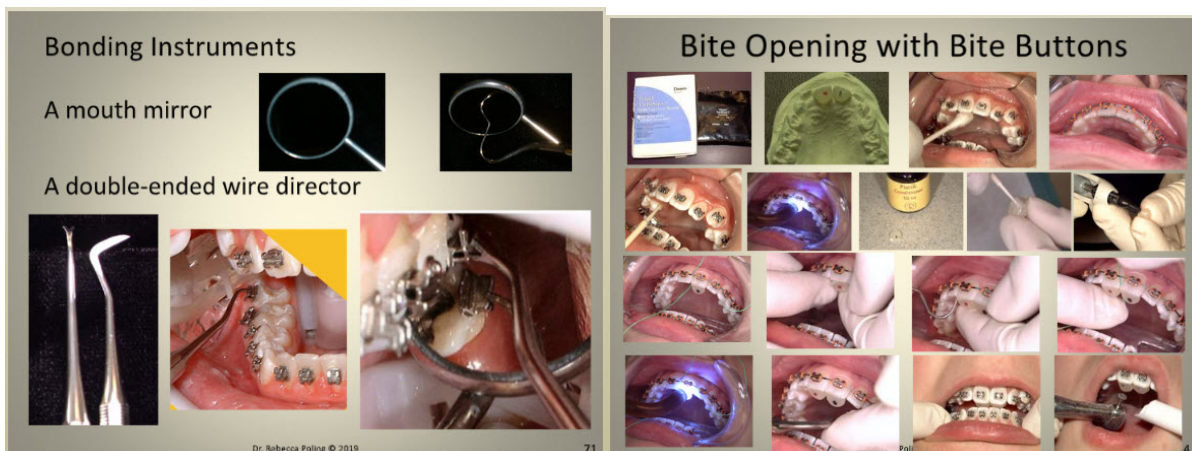


Chapter 16-Bonding to Metal Restoration trains the orthodontic assistant to bond brackets to adhere to metal amalgam restorations. First, the metal surface should be roughened using a diamond or stone bur in a highspeed handpiece as shown in the photo below. A microetcher can also be used to roughen the metal surface as well.

60.29 Review Course-Orthodontic Bonding Second Molar to Second Molar

Presentation: **1 hour 20 minutes** Run Time, **222 Slides**, **No Knowledge Quiz** at this time, **2 CE Credits**

This presentation was given by Dr. Poling at AAO in 2012 and later adapted to current techniques. It reviews all of the relevant information for placing brackets on the teeth second molar to second molar. The learner must view it to receive the Certificate of Completion for Orthodontic Bonding from OrthoTraining.com since it is an important summary of critical bonding information a competent orthodontic assistant should know for tomorrow's orthodontic practice. Orthodontic residents should also learn this information early in their residency to standardize their procedures at the highest level.



Forms and Documents Included in the Orthodontic Bonding Course

All of the instructional sub-courses have under Resources the scripts of the narration of the presentation, Procedure Steps Checklists, Quality of Results Checklists, and many other documents to help the user learn the important concepts quickly and then retain them to apply this knowledge when in the clinic. These documents should be downloaded and studied by the student for quick reference later in preparation for a state exam or if needed in clinic.

Learning Activities of the Course

The learner views the sub-course presentations as many times as it takes to understand and learn the important concepts, as measured by correctly answering all of the embedded quiz questions in the presentation. These quiz questions help the learner focus on the important points. Then the learner rests his/her brain so the new concepts can be transferred to long-term memory. After sleeping, the learner takes the Knowledge Quiz for the sub-course to measure his/her learning of the objectives of the course. There are several Steps Checklists and Quality Results Checklists to help the student learn the steps of each procedure and evaluate the quality of the procedure results that should be followed in clinic to establish standard operating procedures for the greatest efficiency in a practice.

SCORM Tracking of Each Student's Learning Activities and Recording on the Student Dashboard Report

Each student's learning activities such as correctly answering presentation embedded quiz questions, presentation viewing time, Knowledge Quiz completion time, Knowledge Quiz Score, and other learning data, are tracked so that a "learning analysis" can be done for each student and to measure the quality of each course. This data documents student performance and reports it on the Student Dashboard as well as in the Gradebook. This holds the student accountable for learning. In the future, "clinical performance checklists online" may be used in clinic to identify students who have not learned from the online courses so that

they can perform the procedures well. Then, clinical intervention can be done to help the student become clinically proficient. No data is share with any entity. If data is ever used for learning research, all data will be de-identified following research protocol.

Who should take this course?

Every orthodontic resident, orthodontist and clinical team members who place orthodontic appliances such as bonded brackets should learn this full course so that he/she can perform these procedures at the highest standard. This course should be taught to all orthodontic residents and orthodontic assistants when they are in training. All orthodontists, orthodontic residents, and orthodontic assistants should know how to place orthodontic brackets as taught in this course.