Should Your Next Curing Light Be an Online Bargain?

**Gordon’s Clinical Bottom Line:** Resin curing lights are now being offered for sale on the internet at unbelievably low prices. Some dentists are buying them, but most doubt their efficacy. CR scientists tested many of them in their sophisticated optics laboratory. Surprisingly, they had fairly good performance, but some key features were missing and quality was lacking.

Inexpensive, cordless LED curing lights are flooding online shopping sites, and clinicians are asking if they are worth the minimal investment. In August, CR scientists purchased every unit they could find that was priced less than $100—eleven total. The following observations were made.

- All arrived in working order and emitted bright blue light.
- Brand names did not match online information; private labeling was obvious.
- There were no manufacturer names or contact information, only online sellers and distributors.
- All had foreign origins and provided little or no local technical support.
- User instructions were poorly translated or missing.
- Many components were generic and fit poorly or were flimsy.
- None had basic electrical or medical product safety certifications.

The following report shows the features and performance of 11 inexpensive LED curing lights and compares them to premium lights with proven clinical performance.

Are Dentists the Snoring Treatment Experts?

**Gordon’s Clinical Bottom Line:** About 30–50% of adults snore while sleeping. Snoring increases with age and is more prevalent in men. Its treatment has long been associated with dentistry, since reduction or elimination of snoring is produced when the mandible is moved forward or the tongue is depressed by an anti-snoring appliance. Sleep apnea, or abnormal pauses in breathing or abnormally low breathing during sleep, can be life threatening. CR scientists and clinicians have compiled information about the various anti-snore concepts and devices and suggest what to do with patients who have sleep apnea.

- **Snoring** causes sleep disruption, psychological damage, and marital challenges. Should dentists be one of the primary practitioners treating snoring? Although the topic is getting more attention in the lay press, many people do not know that there is professional help for snoring.
- **Sleep apnea or pauses in breathing while sleeping** in both adults and children ranges from 5 to 100 times per hour and causes daytime fatigue, slow reaction time, and an increased risk of heart attack and stroke. It has been estimated that 1 in every 15 Americans is affected by at least moderate sleep apnea which can cause serious physical challenges. **Snoring is a social problem and sleep apnea creates a significant health risk; therefore, they may require different therapies.**

In this report, CR staff, scientists, and Evaluators provide a practitioner survey, a discussion of snoring treatment concepts, information on dealing with sleep apnea, and clinical tips to motivate dentists to consider treating these conditions.

Athletic Mouthguards

**Gordon’s Clinical Bottom Line:** Many teeth are broken or lost in athletic events. These accidents may be prevented if people properly wear acceptable mouthguards. Parents want to protect their children’s teeth when they are maturing through their school years, but they also want to conserve money during this costly time of life in their families. There is a great tendency to purchase inexpensive mouthguards thinking that these protective appliances are adequate. *CR staff, in conjunction with experts in sports dentistry/medicine, provide guidance for practitioners to pass on to their patients.*

It has been estimated that about 50 percent of children have some type of injury to a tooth or teeth during late primary school and early teenage years. Some of these accidents are preventable. Children suffer injuries to their mouth and teeth in accidents, fights, and very importantly, in sporting events. Most children and youth participate in sporting events while they are in primary or secondary school. Estimates are that up to 30% of the oral trauma is from sporting events. Body contact sports are popular among people of these ages. Although mouthguards of various types are worn by most participants during these events, there are still many mouth injuries. Some of the questions that are present relative to preventing mouth injuries during sporting events are:

- Are dentists informing patients about mouthguards?
- What type of mouthguard is best?
- Are these mouthguards available from stores in a typical community?
- Are commercially available mouthguards adequate?
- Should dentists be the primary source of mouthguards?
- How can dentists provide the most adequate mouthguard to patients?
- What is a suggested technique for making a mouthguard?

This report provides survey statistics relative to mouthguard types and their use; suggestions about the best type of mouthguard; a clinical technique; and clinical tips.
Performance Comparison

The following table shows the features and performance of 11 inexpensive lights, two control LED lights, and an older halogen unit. Width of cure and speed of cure data were generated with select materials in controlled laboratory conditions for comparison purposes only—actual clinical results may vary.

<table>
<thead>
<tr>
<th>Photo</th>
<th>Name</th>
<th>Company</th>
<th>Online Price</th>
<th>Intensity</th>
<th>2 mm Layer Speed of Cure (seconds)</th>
<th>Light Shades</th>
<th>Dark Shades</th>
<th>Consistent and Stable Output</th>
<th>Broad Spectrum Output</th>
<th>Light Guide Diameter and Angle</th>
<th>Typical Width of Cure</th>
<th>User Replaceable Battery</th>
<th>Built-In Radiometer</th>
<th>Initial Durability</th>
<th>Overall Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Cicada CV-215-I</td>
<td>CICADA</td>
<td>$9.00 (+$20 shipping)</td>
<td>1770 mW/cm²</td>
<td>2–5</td>
<td>3–25</td>
<td>No</td>
<td>No</td>
<td>7.4 mm 50°</td>
<td>6 mm</td>
<td>Yes</td>
<td>No</td>
<td>Good</td>
<td>Good–Fair</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Cicada CV-215</td>
<td>Unknown</td>
<td>$29.00</td>
<td>1800 mW/cm²</td>
<td>2–5</td>
<td>2–20</td>
<td>No</td>
<td>No</td>
<td>6.9 mm 45°</td>
<td>6 mm</td>
<td>Yes</td>
<td>No</td>
<td>Good</td>
<td>Good–Fair</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>LED Light iScope Corp</td>
<td>LED Light iScope Corp</td>
<td>$75.00 (+$7.99 shipping)</td>
<td>1330 mW/cm²</td>
<td>2–5</td>
<td>3–30</td>
<td>No</td>
<td>No</td>
<td>7.1 mm 50°</td>
<td>5 mm</td>
<td>Yes</td>
<td>No</td>
<td>Good</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>CLY-C240 SANDENT</td>
<td>CLY-C240 SANDENT</td>
<td>$49.80 (+$20 shipping)</td>
<td>1200 mW/cm²</td>
<td>2–7</td>
<td>4–30</td>
<td>No</td>
<td>No</td>
<td>6.5 mm 45°</td>
<td>4 mm</td>
<td>Yes</td>
<td>Yes</td>
<td>Poor</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Cicada CV-213</td>
<td>Unknown</td>
<td>$47.81</td>
<td>1600 mW/cm²</td>
<td>2–6</td>
<td>3–30</td>
<td>No</td>
<td>No</td>
<td>7.3 mm 50°</td>
<td>5 mm</td>
<td>Yes</td>
<td>No</td>
<td>Good</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Woodpecker LED B</td>
<td>Woodpecker</td>
<td>$35.10</td>
<td>1720 mW/cm²</td>
<td>1–3</td>
<td>2–20</td>
<td>No</td>
<td>No</td>
<td>6.7 mm 50°</td>
<td>5 mm</td>
<td>No</td>
<td>No</td>
<td>Fair</td>
<td>Poor</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>LED Curing Light Unknown</td>
<td>LED Curing Light Unknown</td>
<td>$66.00</td>
<td>1480 mW/cm²</td>
<td>2–4</td>
<td>2–20</td>
<td>No</td>
<td>No</td>
<td>6.7 mm 40°</td>
<td>5 mm</td>
<td>No</td>
<td>Yes</td>
<td>Poor</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>LED Light LY-B200</td>
<td>unavoid</td>
<td>$63.99</td>
<td>1090 mW/cm²</td>
<td>2–4</td>
<td>3–25</td>
<td>No</td>
<td>No</td>
<td>6.7 mm 45°</td>
<td>5 mm</td>
<td>No</td>
<td>No</td>
<td>Fair</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Unknown</td>
<td>Unknown</td>
<td>$35.99 (+$4.49 shipping)</td>
<td>1210 mW/cm²</td>
<td>3–6</td>
<td>3–30</td>
<td>No</td>
<td>No</td>
<td>6.9 mm 40°</td>
<td>5 mm</td>
<td>Yes</td>
<td>No</td>
<td>Poor</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>Rainbow LY-A180</td>
<td>Unknown</td>
<td>$29.35</td>
<td>1180 mW/cm²</td>
<td>2–6</td>
<td>3–30</td>
<td>No</td>
<td>No</td>
<td>7.0 mm 45°</td>
<td>5 mm</td>
<td>Yes</td>
<td>No</td>
<td>Fair</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>M-178 LY-C240</td>
<td>unavoid</td>
<td>$69.99</td>
<td>1090 mW/cm²</td>
<td>2–7</td>
<td>3–40</td>
<td>No</td>
<td>No</td>
<td>6.9 mm 45°</td>
<td>5 mm</td>
<td>No</td>
<td>No</td>
<td>Fair</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valo Cordless Ultradent</td>
<td>Valo Cordless Ultradent</td>
<td>$1,534</td>
<td>2810 mW/cm²</td>
<td>1–3</td>
<td>2–15</td>
<td>Yes</td>
<td>Yes</td>
<td>9.5 mm 85°</td>
<td>9 mm</td>
<td>Yes</td>
<td>Yes</td>
<td>Excellent–Good</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paradigm 3M ESPE</td>
<td>Paradigm 3M ESPE</td>
<td>$826</td>
<td>1520 mW/cm²</td>
<td>2–5</td>
<td>3–25</td>
<td>Yes</td>
<td>No</td>
<td>9.0 mm 55°</td>
<td>7 mm</td>
<td>No</td>
<td>No</td>
<td>Excellent–Good</td>
<td>Fair–Poor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Previous generation halogen light</td>
<td>Previous generation halogen light</td>
<td>N/A</td>
<td>330 mW/cm²</td>
<td>7–25</td>
<td>9–&gt;60</td>
<td>Yes</td>
<td>Yes</td>
<td>10.0 mm 50°</td>
<td>7 mm</td>
<td>N/A</td>
<td>Yes</td>
<td>Fair–Poor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary of Table and Clinical Tips

- **Prices** ranged from $9 to $75, making some less than 1% of premium-priced lights.
- **Intensities** were over 1000 mW/cm². Resulting cure times were faster than old halogen technology and similar to many current LED lights, especially with lighter shade resins. As with all lights, dark and opaque shades of some microfill resins require multiple cures and thinner layers.
- **Output was not stable**, but varied during use, steadily dropped, or even increased. Timers were also inconsistent.
- **Narrow spectrum output**, centered around 450 nm, was suitable for most restorative resins, but may not polymerize some translucent composites or glazing resins.
- **Small diameter light guides** produced high intensity, but narrow width of cure. Long tips with a 40°–50° angle make them difficult to position over posterior restorations. 80°–90° tips are preferred.
- **Rechargeable batteries** eventually fail. They should be user-replaceable, consumer-type batteries for greatest convenience.
- **Radiometers** were built-in on two units. Clinicians should regularly check light output with a radiometer and by polymerizing material to verify curing performance.
- **Durability** in an accelerated handling test showed some lights suffered immediate breakdowns of their controls or housings, while most had acceptable initial endurance.

**CR Conclusions:**
The 11 inexpensive LED lights tested had surprisingly high-intensity output and performed well in polymerization tests, but lacked desired width of cure. Controls, housings, and electrical components were of lower quality than premium lights. Long-term reliability is dubious, there are no safety certifications, and manufacturer support is non-existent. Light guides all had small diameters and long, poorly angled tips. Although they lack the features and feel of a quality instrument, they demonstrate that LED curing technology works well and can be significantly less expensive. Clinicians should use curing lights that have proven safety and clinical efficacy.
Are Dentists the Snoring Treatment Experts? (Continued from page 1)

Questionnaire on Snoring and Sleep Apnea (Respondents n=647, randomized from CR subscribers)

• Do you treat snoring? 61% yes; 39% no
• To whom do you refer for snoring if you don’t treat it? 50% physician
  26% other dentist 23% other
• Do you treat sleep apnea? 41% yes; 59% no
• To whom do you refer for sleep apnea if you don’t treat it? 67% physician
  16% other dentist 17% other
• How do you inform patients about your involvement in this area (check all that apply)?
  95% verbal while in office
  24% website
  16% other, brochures, pamphlets, newsletter, posters, etc.
• Do you plan to increase your activity in snoring and sleep apnea? 45% yes for both snoring and sleep apnea
  41% no 11% yes for snoring only 2% yes for sleep apnea only
• How do you treat snoring (check all that apply)?
  98% anti-snoring oral appliance 46% suggest losing weight 29% suggest stopping smoking 29% suggest sleeping on side not back
  17% nasal strips or nose clips 5% CPAP (continuous positive airway pressure)
  4% over the counter nasal sprays 4% anti snoring pillows or clothing 14% other
• How successful have you been stopping snoring? 54% moderately successful 28% very successful 16% slightly successful 2% not successful
• How do you treat sleep apnea (check all that apply)?
  96% anti-snoring oral appliance 43% suggest losing weight 30% suggest stopping smoking 23% suggest sleeping on their side not their back
  13% CPAP (continuous positive airway pressure) 9% nasal strips or clips 4% anti-snoring pillows or clothing 18% other
• How successful have you been treating sleep apnea? 54% moderately successful 29% very successful 15% slightly successful 1% not successful

Diagnosis and Treatment of Snoring and Sleep Apnea

A rational approach for dentists interested in these two conditions is to become educated in snoring and sleep apnea; partner with recognized physicians and sleep centers; and treat these conditions.

Diagnosis of snoring is not a challenge.
• Manifests itself by numerous types of objectionable sounds.
• Caution: Patients who appear to have simple snoring may also have sleep apnea and diagnosis of sleep apnea should be assessed by a sleep medicine physician and analyzed by a sleep study.

Diagnosis of sleep apnea requires a sleep study (a polysomnogram), usually done at a sleep study center or at home with a home sleep study system.
• Discussion with a practitioner specializing in sleep disorders will help to determine which is indicated.

Snoring is caused by:
• Soft-tissues at the back of the throat vibrating against one another
• An obstruction in the nasal airway
• Weak throat muscles, causing the throat to relax and get narrower during sleep
• Skeletal Class II malocclusion
• Muscle relaxants such as alcohol or sedative hypnotics (Benzodiazepines: Xanax, etc.)
• Sleep on one’s back causes the tongue to droop back into the airway

Examples of Successful Anti-Snore/Sleep Apnea Devices

• Adjustable PM Positioner
• Aveo TSD Anti-Snoring Device
• Dorsal fin devices
• EMA (Elastic Mandibular Advancement)
• Full Breath Solution
• Herbst device
• Klearway
• The Moses
• Silent Nite d
• SomnoDent
• TAP (Thornton Adjustable Positioner)
• Therasnore

Clinical Tips

• Educate patients about how dentists can provide anti-snore devices that are usually effective. Posters in your office, webpage information, office newsletters, newspapers, etc.
• Associate with other practitioners providing treatment of sleep apnea. Sleep medicine specialists usually include pulmonologists, otolaryngologists, neurologists, and psychiatrists. Other providers who are an important part of the team include primary care physicians, internists, general dentists, and dental specialists including oral maxillofacial surgeons. Seek out appropriate practitioners in your area.
• Develop a relationship with a dental lab experienced in making anti-snore appliances and sleep apnea devices.

Treatment for snoring relates to opening the narrowed breathing passage. Snoring is usually treated by dentists, since oral appliances are commonly used. However, many treatments are available:
• Anti-snoring oral appliances
• Palatal surgery
• Pillar procedure
• Medications (Protriptyline)
• Losing weight
• Stop smoking
• Sleep on their side not their back
• Over the counter nasal sprays
• Nasal strips or nose clips
• Positional devices (anti-snore pillows or clothing to prevent sleeping on the back)

Treatment of sleep apnea ranges through the following:
• Lose weight and quit smoking
• Oral appliances
• PAP treatments, with CPAP being the most common
• Positional devices to prevent sleeping on the back
• Surgery of several types, including maxillo-mandibular advancement

Example Dental Labs Emphasizing Snoring Appliances

• Dental Services Group
• Gezgen’s Orthodontic Lab
• Glidewell Laboratories
• Great Lakes Orthodontics
• Keller
• Modern Dental Laboratories
• SomnoMed
• Strong Dental Lab

• Reducing snoring using oral appliances may increase sleep apnea. Practitioners are advised to send snoring patients to sleep testing centers to ensure that they do not have sleep apnea or other sleep disorders or to be treated for these conditions.
• Many medical insurance plans, including Medicare, provide benefits for sleep apnea appliances. You may find information on this subject by contacting the American Academy of Dental Sleep Medicine at www.aadsm.org
• Many traffic fatalities relate to falling asleep while driving. Warn your patients about this possibility.
• Caution: Patients using benzodiazepines can lose their airway rapidly.

CR Conclusions:

Treatment of snoring and obstructive sleep apnea is well within the realm of dental practice for those dentists who are interested and who acquire adequate education. Oral appliances used for snoring are very effective, but they may increase sleep apnea if not diagnosed correctly. Differential diagnosis of the reasons for sleep apnea should be accomplished by a recognized sleep apnea specialist, usually a physician. Snoring and obstructive sleep apnea are closely related, and those treating either condition must have appropriate education and work with knowledgeable practitioners and sleep centers. Yes, interested dentists can become skilled in screening and the treatment of snoring and sleep apnea working together with recognized sleep medicine physicians who diagnose the condition.

CR expresses gratitude to Mark J. Friedman DDS, Matthew J. Friedman DDS, Vahboh K. Kapur MD MPH, Steven Marinskiwich DDS, Glen Miller DDS, and Jonathan Parker DDS for their expertise.
Athletic Mouthguards (Continued from page 1)

Information Related to Mouthguards

- Many studies report on the frequent occurrence of oral trauma related to sports.
- Advice about wearing mouthguards comes mainly from coaches, friends, and family, and not from dental professionals.
- Only a few sports mandate mouthguards including football, boxing, field hockey, ice hockey, and lacrosse.
- Ball sports and stick-and-ball sports are considered to be responsible for most orofacial injuries in sports.
- Significant risk sports are soccer, football, rugby, cycling, basketball, wrestling, hockey, cricket, and baseball.
- Orofacial injuries related to sports are varied in type and severity. They are soft tissue lacerations and contusions; dental fractures; concussions; luxations and avulsions; dentalveolar fractures; and mandibular dislocations and fractures.

Comparison of Commercially Available and Custom-Made Mouthguards

<table>
<thead>
<tr>
<th>Stock Mouthguards</th>
<th>Boil and Bite Mouthguards</th>
<th>Custom Vacuum-Made Mouthguard</th>
<th>Custom Pressure Thermoformed Laminated Mouthguards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available in most sporting goods stores</td>
<td>Most commonly used type of mouthguard</td>
<td>Usually made in dental office</td>
<td>Ability to thicken any area as required, usually two or three layers of EVA</td>
</tr>
<tr>
<td>Available in several sizes, usually small, medium, and large</td>
<td>Thermoplastic material, immersed in boiling water and formed in mouth by biting and molding by tongue and finger</td>
<td>Dental staff make impression, stone cast, and adapt the mouthguard material (ethylene vinyl acetate – EVA) copolymer to the cast using a vacuum processing device</td>
<td>Requires high heat and pressure; cannot be made with low heat and vacuum</td>
</tr>
<tr>
<td>Least expensive and least protective</td>
<td>Limited sizes and often do not cover posterior teeth.</td>
<td>Mouthguards with multiple layers cannot be made with vacuum machines</td>
<td>Suggested devices for use in the dental office are: Drufomat from Dentsply Raintree Essix, Biostar VI from Great Lakes Orthodontics, or Erkopress from Glidewell Laboratories</td>
</tr>
<tr>
<td>Bulky and have no retention to teeth</td>
<td>Often modified by wearers, further reducing their effectiveness</td>
<td>Dental staff persons trim and polish the mouthguard</td>
<td>Mouthguard fabrication can be delegated to a dental laboratory</td>
</tr>
<tr>
<td>Must be held in place by biting on them</td>
<td>Not very effective</td>
<td>Better than stock or boil and bite mouthguards</td>
<td>Experts suggest following thickness: facial 3 mm, palatal 2 mm, and occlusal 3 mm</td>
</tr>
<tr>
<td>Dental and medical experts recommend that these types of mouthguards should not be used</td>
<td></td>
<td></td>
<td>Precise adaptation both immediate and long term</td>
</tr>
</tbody>
</table>

Technique to Fabricate a Custom Pressure Laminated Mouthguard

1. Purchase a device that will make pressure thermoformed laminated mouthguards. Examples:
   - Drufomat from Dentsply Raintree Essix
   - Biostar VI from Great Lakes Orthodontics
   - Erkopress from Glidewell Laboratories
2. Learn how to use the device by personal study or preferably by taking a course.
3. Educate your staff on how to make the mouthguards.
4. Determine the time involvement and overhead cost to make custom mouthguard.
5. Set a fee for mouthguards. Average national fees for custom pressure laminated mouthguards range widely depending on type of mouthguard and whether made in office or by lab.
6. Make a plan to educate your patients that your practice provides custom mouthguards.
7. Integrate mouthguard fabrication and placement into your practice.

Clinical Tips

- Educate your staff to be able to provide information to parents about the desirability of custom-made mouthguards.
- Inform parents that an injury to teeth necessitating dental treatment will be very expensive over a lifetime.
- Find a laboratory that will make custom mouthguards for you, or if you have an interested staff member, buy a device and make them in office.
- Many thicknesses and colors of mouthguard material are available depending on patient desires and risk factors.

CR Conclusions:

- Commercial mouthguards are being used most, and they have been shown to be inadequate because of poor fit and inability to absorb shock.
- Custom pressure thermoformed laminated mouthguards are best and should be used as they fit well, include all teeth, are thicker, and absorb shock well.
- Dentists and staff persons should educate parents and their children about the desirability of professionally made custom mouthguards.
- Fabricating mouthguards in-office or using a competent laboratory should be a routine part of dental practice.
At the completion of this test, participants should be able to:
• Make an informed decision about an online purchase of an inexpensive curing light
• Assess snoring and sleep apnea and advise patients seeking treatment for these conditions
• Discuss the various types of mouthguards and recommend the best mouthguard for their patients

CE Self-Instruction Test—Dentistry Update Special Edition

1. Inexpensive curing lights had the following problems, except:
   - A. Name of light did not match what was ordered online
   - B. No manufacturer contact information
   - C. Poor instructions
   - D. Some lights would not turn on.

2. Which statement about inexpensive curing lights is true?
   - A. Cost was only a little less than premium-priced lights.
   - B. Intensity was low and cure was slow.
   - C. Narrow spectral output may not polymerize some translucent resins.
   - D. All had user-replaceable batteries.

3. Which statement regarding curing lights is true?
   - A. All “control” lights tested had all desired features.
   - B. Clinicians are intrigued by inexpensive lights and some are purchasing them.
   - C. Inexpensive lights tested had consistent, controlled output.
   - D. Inexpensive lights tested had solid construction and good durability.

4. About ____ percent of adults snore.
   - A. 10–20%
   - B. 30–50%
   - C. 40–90%
   - D. 50–60%

5. Sleep apnea is ______________ snoring.
   - A. Always associated with
   - B. Frequently associated with
   - C. Not associated with
   - D. The same as

6. Sleep apnea:
   - A. Should be diagnosed by a general dentist
   - B. Should be diagnosed by a physician specializing in sleep apnea
   - C. Is the same as snoring
   - D. Is not a medical concern

7. The most adequate type of athletic mouthguard is:
   - A. Custom vacuum made
   - B. Stock
   - C. Custom pressure thermoformed laminated
   - D. Boil and bite

8. What percent of dentists are providing mouthguards in their offices?
   - A. 25%
   - B. 52%
   - C. 72%
   - D. 81%

9. OraBloc is a local anesthetic which is:
   - A. Lidocaine
   - B. Mepivocaine
   - C. Articaine
   - D. Marcaine

10. Posi-Prene Gloves are made of:
    - A. Nitrile that has more elasticity and less resistance to tearing
    - B. Polychloroprene, a rubber also called neoprene that has excellent clinical characteristics and resistance to tearing
    - C. Latex that is very thin and has excellent tactile sensitivity
    - D. Vinyl that has more elasticity and less resistance to tearing

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**Noteworthy Products (Continued from page 1)**

**Lower Price and Longer Shelf Life with this Articaine Anesthetic**

Orabloc is the same formulation of anesthetic as the highly popular Septocaine (articaine hydrochloride 4% and epinephrine 1:100,000). It offers fast onset (1–6 minutes) and duration of up to 60 minutes. Most CR Evaluators use articaine as their standard local anesthetic. However, some clinicians do not use articaine for mandibular block injections to reduce the chance of parasthesias that have been reported by some clinicians.

**Clinical Tip:** This profound anesthetic requires about 1/2 the volume as lidocaine, 2% 1:100,000 epinephrine.

**Advantages:**
- Lower cost
- Quick onset of anesthesia
- Profound anesthesia
- Works well and is dependable
- Required less volume of anesthetic

**Limitation:**
- Lingering question of potential higher incidence of parasthesias with articaine in general

CR Conclusions: 94% of 34 CR Evaluators stated they would purchase Orabloc for their practice. 94% rated it excellent or good and worthy of trial by colleagues.

**Improved Impression Accuracy is Achieved by Fastest Intraoral Set of this Popular VPS**

Impression 4 has maintained the working time of previous versions of this popular impression material and dramatically reduced the intraoral setting time of Super Quick to 75 seconds by adding chemistry that heats the impression material while in the oral cavity. The faster setting reduces the potentially problematic movements of patients observed in impressions that require longer setting times. Impression 4 is also very hydrophilic for accurate detail reproduction and flows into details of preparations. Additional improvements are colors that allow easy readability of impression and a pleasant mint flavor.

**Advantages:**
- Fast intraoral setting time improved impression making, especially for patients with gagging tendencies
- Impressions were accurate
- Detail was easy to read with impression colors
- Pleasant mint flavor

**Clinical Tip:** While setting time of Super Quick is excellent for single-unit and short-span bridge cases, it was too fast for some Evaluators who accomplish multi-unit full arch cases. Regular set is also available with intraoral 2-minute set time.

CR Conclusions: 96% of 24 CR Evaluators stated they would incorporate Impression 4 into their practice. 96% rated it excellent or good and worthy of trial by colleagues.

**New Exam Glove Material is Resistant to Tear, Latex Free, and has High Clinical Use Rating**

CR has been testing medical exam gloves for three decades. In the last major CR evaluation it was noted that many brands had thinner latex and more tearing upon donning (see comparison of all gloves tested in Clinicians Report February 2013). Posi-Prene Medical exam gloves are made of polychloroprene, a rubber also called neoprene, which is used in wet suits and other applications and is latex-free. Polychloroprene was the only glove material to receive an excellent grade for donning. It was also much less likely to tear than most latex brands. Posi-Prene also received excellent ratings for fit, tactile sensitivity, and cuff length, and an excellent–good rating for resistance to tearing. Now available in green, white, and pink colors.

**Advantages:**
- Glove is very elastic and stretches rather than breaking when donning
- Easy to put on and take off
- Adapts to hand for a good fit and comfort
- Good texture
- Does not inhibit set of VPS impression material like some latex and nitrile gloves

**Limitation:**
- Some VPS impression materials adhere to polychloroprene

CR Conclusions: 83% of 23 CR Evaluators stated they would purchase Posi-Prene Gloves for their practice. 95% rated it excellent or good and worthy of trial by colleagues.

**Instructive Book Demonstrating Helpful Sutures not Previously Known to Many Dentists**

Soft-bound, 86-page book (4th edition) by Lee H. Silverstein, DDS, MS, with excellent diagrams that show step by step and in detail how to form each suture, including some that have not been taught to most dentists during their traditional dental education. Instructions are well written and easy to follow. Includes three hours of CE with submission of test.

**Advantages:**
- Excellent illustrations and photos
- Demonstrates helpful sutures not previously known to many dentists
- Easy-to-follow explanations and steps
- Complete and comprehensive information
- Well-written text

**Limitation:**
- Some CR Surgeon Evaluators preferred other suture types over “braided silk suture thread as the material of choice,” because of plaque accumulation and inflammation.

CR Conclusions: 83% of 24 CR Evaluators stated they would incorporate The Suture Book into their practice. 92% rated it excellent or good and worthy of trial by colleagues.