

# IN PRACTICE *Infection Control*

Dentistry's Resource for Infection Control and Safety



## Choosing Infection Control & Safety Products

*Steps toward selecting the right products for your practice*

A number of seemingly equivalent products are available to meet various dental infection control and safety needs. Unfortunately, no blanket recommendations will meet the expectations of every dental practice. The right product choice most often depends on the individual needs and characteristics of the dental office, so clinicians must be informed consumers. Considering marketing claims and general product information are the only ways to ensure appropriate, cost-effective product choices. Developing a framework for product selection and use is key for a well-managed practice.

### Finding reliable information

The information needed to make informed choices is available for many specific products. Professional journals provide research-based information on the safety and efficacy of the active ingredients in many products, and sales representatives can be a good source of technical data and answers to questions about their products. Catalogs offer convenient product and cost comparisons, but they may not provide enough details on products that are new to the dental practice. Trade magazines also may review efficacy or outline product features for comparison.

Properly performed, product compar-

isons can be a great tool for evaluating product choices. The best source for these reports is the peer-reviewed literature. Colleagues also can assist with product selection. Trade shows, web sites, and sales reps provide information directly from the manufacturer. An excellent resource for brand-specific information, these sources are not always the most unbiased choice for information on competing products.

### Rules of thumb for selection

No matter what the type of product, some questions can be applied to assess its suitability for the job, acceptability to staff, and cost-effectiveness. In making product selection decisions, consider the product's:

- **Label claims.** Do they fit well with the needs of the practice? Does it meet the current standards of care and current guidelines for infection control?
- **Directions for use.** Will the product be easy to use under routine practice conditions? Are instructions clear, easy to follow, and compatible with the conditions of use in the practice? Are any special precautions required when using the product, and if so, are they reasonable?
- **Compatibility with patients, staff, and materials in the practice.** Are the product's components compatible with

*continued on page 2*

## Contents

- 3 Compliance Corner
- 3 Glossary
- 4 Ask OSAP
- 5 OSAP Checklist
- 6 Calendar
- 7 Continuing Education Test
- 8 Practice Tip

## Learning Objectives

- Identify basic considerations for selecting dental infection control and safety products
- Learn the roles of various agencies in product safety, efficacy, and use in practice, as well as what they mean to dental healthcare workers
- Become familiar with some product labeling terminology
- Identify reliable sources for information on commercially available products





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## Choosing Infection Control & Safety Products

*continued from front cover*

staff and with materials used in routine practice? Does the product contain any allergens or chemical components that would adversely affect safety, general comfort, or compliance?

- **Costs.** What are initial purchasing costs? Does the product require special storage or disposal? Would using the product as directed speed or slow operator turnaround time? Would more or less hands-on staff time be required to use the product as directed?
- **Regulatory registration or clearance.** Has the product been reviewed by the appropriate regulatory body? Chemicals, dental materials, and other medical devices used in the delivery of health care are regulated by the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), or both. See page 3 for more details on the roles of these agencies.
- **Consistency with public health recommendations.** Does the product meet current standards of care and infection control guidelines? Guidelines from the Centers for Disease Control and Prevention, American Dental Association, and OSAP may list general product features, categories, materials, or ingredients considered appropriate for further reducing the risk of disease transmission in dentistry. See page 3 for more details.

Building on this basic list of criteria, clinicians can assess the suitability of any product used to protect patients and staff.

### Weighing product features and costs

Final purchasing considerations should take into account user satisfaction and cost. User satisfaction is based on product-specific features such as fit, comfort during use, storage, mixing requirements, instructions for use, and disposal requirements. Because even features such as odor, method of delivery or dispensing, and packaging or color can influence compliance, practices should not discount the value of some of these more subjective considerations.

Although price remains an important factor in every purchasing decision, a product's costs aren't always as clear cut as



the dollars and cents listed in the catalog. Always remember to consider factors outside of the purchase price, such as staff time, shelf life, and disposal costs. A seemingly inexpensive product that slows operator turnaround or takes staff away from other duties may not offer much in the way of savings. Similarly, purchasing in bulk may save the practice money at the point of purchase, but the discount is compromised if the entire quantity can't be used before its expiration date.

Comparing both the outright and the backend costs of equivalent products is the best way to reduce overhead while retaining safety, efficacy, and efficiency.

### In summary...

Only proper analysis can determine the best product, vendor, and quantity of a product to be ordered. The challenge is to remain open to new technology and products and to use sound judgment and cost-effective decision-making in the selection and purchasing process.

Dental practices must balance the cost of a product against its effectiveness. As such, always take into account:

- how the product is used;
- how often it is used;
- how it is packaged;
- storage requirements and shelf life;
- staff opinions, needs, and allergies; and
- the quality and reliability of support from the manufacturer or distributor.

Although product analysis may be performed by the dentist or the designated employee with purchasing authority, every dental team member has a role in product selection. Input from end users is critical in choosing products. All employees who use asepsis and safety products should routinely share their opinions with the office's exposure control manager to improve product selection. **OSAP**

## Compliance Corner



**ADA** The American Dental Association outlines the products and procedures needed to provide safe dental care in its 1996 Infection Control Recommendations for the Dental Office and the Dental Laboratory. To assist practitioners in selecting quality products, it also evaluates dental products voluntarily submitted by manufacturers to its Seal of Acceptance program ([ada.org/prof/prac/seal/index.html](http://ada.org/prof/prac/seal/index.html)) to ensure the safety, efficacy, and consistency of label claims.

**CDC** Centers for Disease Control and Prevention guidelines define public health policy. Setting policy on barrier techniques, disinfection, instrument processing, and other practices, CDC is updating its 1993 dental infection control guidelines ([www.cdc.gov/OralHealth/guidelines.htm](http://www.cdc.gov/OralHealth/guidelines.htm)) for scheduled release in late 2002.

**EPA** The Environmental Protection Agency registers all chemical disinfectants and decontaminants. To demonstrate manufacturer compliance, these agents must have an EPA registration number on their labels.

**FDA** The Food and Drug Administration regulates medical devices and their accessories. Companies must receive FDA clearance to market a product, referred to as a "510(k)" or a "premarket clearance." FDA also regulates chemicals that make a sterilant claim. To verify that a product has been cleared for market, contact the manufacturer or go to [www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRL/listing.cfm](http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRL/listing.cfm).

**OSAP** OSAP's infection control guidelines and position papers ([osap.org/resources](http://osap.org/resources)) define general products and practices for safe dental care. Disinfectant reference lists ([osap.org/issues/chemichart.pdf](http://osap.org/issues/chemichart.pdf)) offer information on agents sold to dental offices, and web-based Issue Focuses ([osap.org/issues](http://osap.org/issues)) include lists of available products.

**OSHA** Although the Occupational Safety and Health Administration regulates employers' activities with regard to worker safety, it does not register, regulate, or approve products for use toward that end. No equipment, training aid, or safety product on the market is "OSHA approved."

## Glossary



### Some terms to know when choosing products for practice

**Antimicrobial** Activity that destroys or otherwise inactivates microorganisms

**Antiseptic** Destroys or inhibits growth of microorganisms on tissues

**Cleaner** Removes debris that can interfere with disinfection or sterilization processes and reduces the number of microorganisms present on a surface

**Disinfectant** Destroys or inactivates most microorganisms to a number that poses no threat of disease

**High-level disinfectant** Destroys or inactivates all microbial life, including spores, with extended (3-10 hours) contact; also referred to as chemical "sterilants"

**Hospital disinfectant** Agents effective against *Staphylococcus aureus*, *Salmonella*

*choleraesuis*, and *Pseudomonas aeruginosa*

**Intermediate-level disinfectant** Destroys *Mycobacterium tuberculosis* var. *bovis*, viruses, fungi, and vegetative bacteria; used for disinfecting operatory surfaces

**Low-level disinfectant** Kills some viruses and fungi; used in dentistry for general housecleaning purposes (floors, walls)

**Reuse life** Duration a disinfectant is effective under repeated challenges

**Shelf life** Length of time a product may be stored prior to use

**Tuberculocidal** Inactivates the benchmark organism *Mycobacterium tuberculosis* var. *bovis*

**Use life** Time a disinfectant is effective after its original container is opened

## IN PRACTICE *Infection Control*

*Infection Control In Practice* is a resource prepared for clinicians by the Organization for Safety & Asepsis Procedures with the assistance and expertise of its member-contributors. OSAP is a nonprofit, independent organization providing information and education on infection control and occupational health and safety to dental care settings worldwide.

Information in this issue has been brought to you with the help of the following individuals:

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# Putting it All Together



**T**he right product choice most often depends on the individual needs and characteristics of the dental office. To choose wisely for your practice, you must be an informed consumer. Developing a framework for product selection and use is the key to a safe, well-managed practice.

1. Determine your practice's needs and the desired outcome for each infection control and safety product considered for purchase. Use the checklist on page 5 as a building block for your list of characteristics, desirable features, and considerations for a number of infection control product categories.
2. Look into it.
  - Read through trade magazines and catalogs for items of interest.
  - Visit booths at dental meetings and conferences to see products first hand.
  - Seek out technical and user evaluations of the product.
  - The USAF Dental Investigation Service ([www.brooks.af.mil/dis](http://www.brooks.af.mil/dis)) assesses all types of dental products.
  - The ADA Seal of Acceptance program ([ada.org/prof/prac/seal/index.html](http://ada.org/prof/prac/seal/index.html)) evaluates products against strict safety and efficacy standards.
  - Clinical Research Associates ([www.cranews.com](http://www.cranews.com)) conducts and publishes technical evaluations.
  - Talk to your colleagues about their experiences with the product of interest.
3. Contact manufacturer representatives for more information.
4. Look for appropriate regulatory registration or clearance. An EPA registration number appears on the label of all registered low- and intermediate-level disinfectants. FDA clearance usually is not acknowledged on

a product's label or packaging. To verify FDA clearance, contact the supplier or visit the FDA medical devices database at [www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRL/listing.cfm](http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRL/listing.cfm).

5. Compare the product against the outcome you want and the needs you have. Give special thought to the instructions for use, precautions listed, disposal requirements, and compatibility with other materials, devices, and equipment. Make sure the product is acceptable to the staff members who will be using it.
6. If the product appears to be a safe, effective alternative for your practice, obtain samples to try in your office. Note: You may find that your own product is the best available option, in which case no change is warranted.
7. Always ensure that workers are trained in the proper handling, use, and disposal of any product brought into the dental practice.
8. Seek feedback from staff and, if appropriate, patients on product comparisons.
9. Compare costs, looking beyond initial purchase price. Consider the life expectancy of the product, the benefit(s) to the office, and the cost of training and introducing a new product in practice. Every dental office is individual, so cost comparisons may yield different results for different practices.
10. Now answer this question: "Will this product make a positive difference in our infection control and safety program?" **OSAP**

## Ask OSAP

**Q**: Our dental hygienist recently cut herself while debriding an instrument during a routine scaling. How can we remove gross debris from instrument tips without risking injury or interrupting patient treatment? —J.K., Akron, Ohio

**A**: Although OSAP is aware of no official procedure for debriding instruments, with any procedure involving contaminated sharps, safety must remain the top priority. Instruments should never be debrided via a handheld cotton roll, by wrapping a 2x2 gauze sponge around a gloved finger, or by folding a gauze pad between two fingers. Examination gloves cannot protect against puncture wounds or cuts, and such procedures place the worker's hand in close contact with the contaminated instrument tip. Instead, some practitioners suggest creating a debridement tool by taping a moistened cotton ball or roll to the edge of the bracket tray. Using only one hand on the instrument's handle, the instrument tip is simply inserted into the cotton and removed, leaving the debris behind. Some commercial products consisting of sponges with adhesive backing also are available for instrument debridement. Check with your local dental product supplier. (Note: Because the goal is to eliminate close contact between the worker and the instrument tip, these products should never be adhered to a gloved hand.)

Despite taking precautions to reduce injuries, accidents can happen. Make employees aware of the importance of immediately reporting any injuries and ensure that all injured employees are referred to a qualified healthcare provider for medical evaluation and, if warranted, follow-up. **OSAP**

Do you have an inquiry about infection control, occupational health, or practice safety? Ask OSAP. Send your questions to [office@osap.org](mailto:office@osap.org)

# OSAP Chart & Checklist



## Product Selection Criteria and Considerations

**T**his month's OSAP checklist serves as a framework for purchasing considerations surrounding infection control and safety products. Because every dental office is different, purchasing managers should work with clinical staff to determine which criteria are most important to their practice setting.

### Personal protective equipment

#### Gloves

- **Sizes.** Stock sizes to fit all at-risk employees
- **Fit.** Snug, comfortable fit; not too tight
- **Allergies and sensitivities.** Maintain latex-free treatment kits for patients who may be latex-allergic; low-protein gloves may lower risks of developing an allergy
- **Ambidextrous / hand-specific.** Less expensive ambidextrous gloves may contribute to fatigue and repetitive stress disorders; more expensive right-left-specific gloves offer better fit, more comfort, and less strain on the hand and wrist
- **Shelf life.** Affected by temperature, humidity, or light

#### Masks

- **Sizing and fit.** Should fit the face well and create a light seal over the nose and mouth; a form-fit over the bridge of the nose minimizes fogging of eyewear
- **Filtration.** Look for filtration efficiency of 95% for particles 3 to 5 microns in diameter
- **Comfort.** Encourages compliance

#### Apparel

- **Barrier to contaminants.** Does the garment protect skin and street clothes that could become contaminated?
- **Appropriate for each task.** In the context of each procedure routinely performed in the practice, consider:
  - **Protection.** From splash, spatter, and debris
  - **Comfort.** Fabrics that "breathe"
- **Design and features.**
  - Fluid-resistance
  - High-necked or collared
  - Long sleeves
  - Provides coverage to the knees when seated
- **Cost-effectiveness.** Compare costs of (1) bulk purchasing disposable garments; (2) purchasing and installing a washer and dryer and the time spent doing laundry; and (3) a medical laundry service

#### Eyewear / face shields

- **Impact resistance.** Look for impact-resistant plastic
- **Side protection.** Coverage both over and around the eyes
- **Suited for specific applications in practice.**
  - **For large amounts of spatter / debris,** full-face, chin-length plastic shields may be more comfortable and effective; added coverage helps to keep face masks from becoming damp and losing their barrier efficacy

### Surface asepsis

#### Disposable barriers

- **Fluid-resistance.** Barriers made of plastic or plastic-backed paper are impervious
- **Cost-effectiveness.** Premade barriers are more expensive than bulk barriers or plastic food wrap, but the added time needed to measure, cut, apply, and remove the less expensive barrier may make the preformed option more cost-effective

#### Surface disinfectants

- **Claims.** Look for:
  - EPA-registered for use on surfaces
  - Intermediate-level hospital disinfectant
  - Tuberculocidal
  - Cleaning ability
  - Active in the presence of debris or bioburden
  - Reasonable contact time (i.e., 10 minutes or less for tuberculocidal activity)
- **Directions for use.**
  - Instructions should be clear
  - Disinfectant should be easy to use.
  - If the agent must be diluted for use, is tap water acceptable? (Hard water inactivates some disinfectants)
- **Supply considerations.**
  - Offered in a non-aerosol spray bottle, or if the agent requires dilution, pump spray bottle is supplied
  - Use life of the (diluted) disinfectant
  - If not mixed fresh daily, is there an indicator to determine when the dilution use life has expired?
- **Precautions and disposal.**
  - Safety equipment required with the chemical
  - Special disposal considerations for your area

### High-level disinfectants

- **FDA clearance.** Visit [www.fda.gov/cdrh/ode/germlab.html](http://www.fda.gov/cdrh/ode/germlab.html) to verify FDA clearance.
- **Reasonable contact time.** Check the manufacturer's instructions. With some chemicals, instruments have to be immersed undisturbed for 10 hours to achieve sterilization.
- **Special precautions.** For example, use of protective equipment or a closed container to prevent inhalation of fumes.
- **Disposal requirements.**

# Calendar



**MAY 2002**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Monthly: update chemical inventory; discard expired supplies, drugs	2	3 Weekly: spore test sterilizers	4
5	6 Weekly: waterline monitoring/maintenance; clean evacuation traps	7	8	9	10 Weekly: spore test sterilizers	11
12 MOTHER'S DAY	13 Weekly: waterline monitoring/maintenance; clean evacuation traps	14	15	16 OSAP 2002	17 Weekly: spore test sterilizers SYMPOSIUM IN	18 NASHVILLE ARMED FORCES DAY
19 OSAP SYMPOSIUM ENDS	20 Weekly: waterline monitoring/maintenance; clean evacuation traps	21	22	23	24 Weekly: spore test sterilizers	25
26	27 MEMORIAL DAY OBSERVED	28 Weekly: waterline monitoring/maintenance; clean evacuation traps	29	30 MEMORIAL DAY	31 Weekly: spore test sterilizers	

To help practices stay on track, OSAP provides this calendar listing typical schedules for periodic maintenance, recordkeeping, and infection control activities. This schedule is intended only to serve as a guide. Proper practices, procedures, and maintenance schedules can vary according to the kinds of products used, the practice type, and patient volume. Always follow the device or equipment manufacturer's instructions for maintenance and infection control.

For a monthly dental office calendar you can customize to best meet the needs and schedules in your practice, visit [osap.org/calendar.htm](http://osap.org/calendar.htm). (Adobe Acrobat Reader required.)

**JUNE 2002**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 Monthly: update chemical inventory; discard expired supplies, drugs Weekly: waterline monitoring/maintenance; clean evacuation traps	4	5	6	7 Weekly: spore test sterilizers	8
9	10 Weekly: waterline monitoring/maintenance; clean evacuation traps	11	12	13	14 Weekly: spore test sterilizers Semi-annual: Check fire extinguisher tags FLAG DAY	15
16 FATHER'S DAY	17 Weekly: waterline monitoring/maintenance; clean evacuation traps	18	19	20	21 Weekly: spore test sterilizers	22
23 30	24 Weekly: waterline monitoring/maintenance; clean evacuation traps	25	26	27	28 Weekly: spore test sterilizers	29



## Practice Tip

### Testing Your Ultrasonic Cleaner

**I**t costs just pennies and only takes a few minutes, says Long Island, N.Y., dentist and infection control consultant Dr. Harold Edelman.

Dr. Edelman is talking about “the foil test.” Used to make sure a cleaning unit is delivering consistent ultrasonic activity throughout the tank, this simple test uses household aluminum foil and takes just 20 seconds to complete.

- “Use scissors to cut a piece of lightweight aluminum foil about the width of the ultrasonic cleaning tank and about an inch or so deeper,” explains the doctor.
- Prepare a fresh tank of the cleaning solution you normally use in the ultrasonic unit. Fill to about an inch and a half from the top of the tank.
- Turn the unit on and set the timer to five minutes to degas.
- When time has elapsed, insert the foil vertically into the tank. Hold

the sheet of foil lengthwise across the long side of the tank and centered against the tank width. Extend the foil down toward the tank bottom. Do not let the foil touch the bottom of the tank.

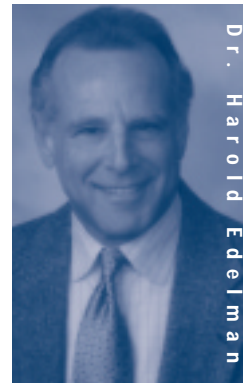
- Turn on the unit and hold the foil steady for exactly 20 seconds. When time has elapsed, turn off the cleaner, remove the foil, and carefully dry it, avoiding wrinkling. “After this quick test, look at the foil sample. If you see uniform pitting and indentations across the part of the foil that was immersed, your unit is delivering uniform cleaning power.

“If you see smooth areas where the foil isn’t pitted or pebbled, you’ve got what equipment manufacturers call ultrasonic ‘blind spots,’” explains Dr. Edelman.

In the case of blind spots, immediately retest the unit. If a second test confirms the presence of blind spots, “you know you’d better schedule serv-

ice,” advises Dr. Edelman. Sending the foil sample along with the repair request can give the technician a heads-up as to the trouble spot and help to bring this essential piece of infection control equipment back into service ASAP. **OSAP**

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