

School of Dentistry

Environmental Health & Safety Newsletter

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ENVIRONMENTAL

Tips for your everyday life

Are you heating up more than your lunch?



Migrating chemicals

When food is wrapped in plastic or placed in a plastic container and microwaved, substances used in manufacturing the plastic (plasticizers) may leak into the food. In particular, fatty foods such as meats and cheeses cause a chemical called diethylhexyl adipate to leach out of the plastic. This certainly sounds scary, so it's little wonder that a warning is making its way across the Web. But here's what the e-mails don't mention. The FDA, recognizing the potential for small amounts of plasticizers to migrate, closely regulates plastic containers and materials that come into contact with food. The FDA requires that manufacturers test these containers and that those tests meet FDA standards and specifications. It then reviews the test

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HEALTH

What's new in Dentistry?



Avoid Low Back Pain

Musculoskeletal disorders, particularly low back pain, are common among oral health professionals. Here are strategies to keep your back healthy.

By Karen Kott, PT, PhD, and
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Low back pain (LBP) is a common musculoskeletal disorder among oral health professionals and is often associated with overuse and strain of muscles. Appropriate back support, such as a lumbar roll that maintains the low back curve, helps reduce the occurrence of spine-related musculoskeletal injuries. However, other factors such as prolonged sitting, sitting with poor posture, sitting with uneven pressure, and twisting the spine while sitting or standing, may also contribute to this disorder.

Strategies for Prevention

Low back pain does not have to be an occupational health hazard for oral health professionals. Identifying common causes and risk factors helps practitioners implement preventive measures. Risk factors and causes for LBP include: operator posture, patient positioning, and elements unique to dental environments such as lighting and stools.^{10,11} Table 1 provides a list of problems, causes, and recommendations for low back pain.^{7,11-20} Careful consideration of these factors helps to identify the influencing aspects and aids in recommendations for prevention.

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data before approving a container.

Some of these tests measure the migration of chemicals at temperatures that the container or wrap is likely to encounter during ordinary use. For microwave approval, the agency estimates the ratio of plastic surface area to food, how long the container is likely to be in the microwave, how often a person is likely to eat from the container, and how hot the food can be expected to get during microwaving. The scientists then measure the chemicals that leach out and the extent to which they migrate to different kinds of foods. The maximum allowable amount is 100–1,000 times *less* per pound of body weight than the amount shown to harm laboratory animals over a lifetime of use. Only containers that pass this test can display a microwave-safe icon, the words “microwave safe,” or words to the effect that they’re approved for use in microwave ovens.

What about containers without a microwave-safe label? Only those containers labeled “microwave safe” have been tested and found safe for that purpose. A container that’s not labeled safe for microwave use isn’t necessarily *unsafe*; the FDA simply hasn’t determined whether it is or not.

Here are some things to keep in mind when using the microwave:

- Most takeout containers, water bottles, and plastic tubs or jars made to hold margarine, yogurt, whipped topping, and foods such as cream cheese, mayonnaise, and mustard are not microwave-safe.
- Microwavable takeout dinner trays are formulated for one-time use only and will say so on the package.
- Don’t microwave plastic storage bags or plastic bags from the grocery store.
- Before microwaving food, be sure to vent the container: Leave the lid ajar, or lift the edge of the cover.
- Don’t allow plastic wrap to touch food during microwaving because it may melt. Wax paper, kitchen parchment paper, or white paper towels are alternatives.
- If you’re concerned about plastic wraps or containers in the microwave, transfer food to glass or ceramic containers labeled for microwave oven use.

For the full article go to:

<http://www.health.harvard.edu/fhg/updates/update0706a.shtml>

Maintaining a neutral body position is vital for a healthy working posture. The focal distance between the operator’s eye and the treatment object is key to determining and maintaining correct posture; consequently, more practitioners are electing to wear magnification loupes. However, to avoid the challenge of eye fatigue related to wearing loupes, clinicians should relax their eyes by not wearing the loupes during procedures such as greeting a patient, setting up or breaking down an operatory, and providing oral care instructions.

Conclusion

LBP may appear to be an occupational hazard that cannot be avoided, but several actions can be taken to modify risk factors or address negative cumulative effects. Attention to work-related ergonomics and health-related components of fitness can provide ways to prevent and manage low back problems. Sitting does not have to be detrimental to health. Standing and moving around, making sure the stool’s lumbar support is properly adjusted, using loupes, and incorporating mild low back stretching exercises into the day can help dental professionals maintain a healthy back and overall good health.

For the full article go to:

<http://www.dimensionsofdentalhygiene.com/ddhright.aspx?id=10198>

*Tables 1 &2 are on page 5

Any issues on your mind?

Send me an email:

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SAFETY

What's going on in SOD...

Understanding Personal Protective Equipment requirements

These guidelines apply to all clinic personnel, including students, residents, faculty and staff, who may come into contact with blood, body fluids and tissues.

In the Clinic

Proper PPE includes; gowns, masks, gloves, eyewear, long pants, closed toe shoes.

Gowns:

Should be worn when in any clinical patient care area

Blue=Students/Residents; Yellow/White= Faculty

Gloves:

Should be worn when performing patient care

- Sterile- should be worn in surgical procedures involving the incision and/or reflection of soft tissue and bone exposure
- Medical exam- should be worn whenever there is a potential for contact with blood, blood-contaminated saliva or mucous membranes
- Heavy duty- should be worn to process instruments before sterilization or high level disinfection

Eyewear:

Are to be worn during all patient exams and treatment and in the decontamination room. Patients should wear eye protection during dental treatment. All eyewear are to be cleaned and disinfected between patients.

Masks:

Are be worn during all patient exams and treatment. After each patient and during patient treatment if applicable, masks should be changed if moist or contaminated.

Long Pants and Closed Toe Shoes

Are to be worn when in any clinical area

EH&S TRAINING SCHEDULE

LABORATORY SAFETY FOR PRINCIPAL INVESTIGATORS AND LABORATORY SUPERVISORS

Tuesday	March 22, 2011	10:00 a.m. - 11:30 a.m.	CHS 13-105
Tuesday	April 12, 2011	2:30 p.m. - 4:00 p.m.	CHS 23-105

LABORATORY SAFETY FUNDAMENTAL CONCEPTS (CLASSROOM) - ALL LAB PERSONNEL EXCLUDING PI AND LAB SUPERVISOR

Wednesday	February 23, 2011	10:00 a.m. - noon	CNSI 3200
Monday	February 28, 2011	1:00 p.m. - 3:00 p.m.	CNSI 3200
Monday	March 7, 2011	10:00 a.m. - noon	CNSI 3200
Wednesday	March 16, 2011	1:00 p.m. - 3:00 p.m.	CNSI 3200
Monday	March 21, 2011	2:00 p.m. - 4:00 p.m.	CNSI 3200
Wednesday	March 30, 2011	10:00 a.m. - noon	CNSI 3200

HEART SAVER FIRST AID WITH CPR AND AED

Thursday	February 24, 2011	8:30 a.m. - 4:30 p.m.	1000 Veteran Ave.
Wednesday	March 30, 2011	8:30 a.m. - 4:30 p.m.	1000 Veteran Ave.
Wednesday	April 27, 2011	8:30 a.m. - 4:30 p.m.	1000 Veteran Ave.
Thursday	May 26, 2011	8:30 a.m. - 4:30 p.m.	1000 Veteran Ave.
Thursday	June 30, 2011	8:30 a.m. - 4:30 p.m.	1000 Veteran Ave.

For more information go to:

<http://map.ais.ucla.edu/portal/site/UCLA/menuitem.789d0eb6c76e7ef0d66b02ddf848344a/?vgnextoid=31bf744ebd7cb110VgnVCM100000e1d76180RCRD>

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Personal Hygiene:

1. Hair should be cleared away from the face
2. Facial hair should be covered by a face mask or shield
3. Jewelry should not be worn on the hands or arms during patient treatment
4. Nails must be clean and short

These guidelines apply to all research and clinical personnel including students, residents, faculty and staff who may come into contact with hazardous chemicals, biological or unsealed radiological materials.

In the Laboratories

Proper PPE includes; gowns/lab coats, masks, gloves, eyewear, long pants, closed toe shoes

Gown/Lab Coats:

Green= 4th floor pre-clinical lab (SIM or BISCO labs) **only**

Pink= Students/Residents 3rd floor clinical lab **only**

Clinical Gowns allowable in the 3rd floor clinical lab

Are required to be worn while working on, or adjacent to, all bench top procedures utilizing hazardous chemicals, biological or unsealed radiological material.

Gloves:

Are to be worn while utilizing any hazardous chemicals, biological or unsealed radiological material. They should not be worn when working with non-hazardous materials and an open flame or other heat source that might cause injury by melting plastic gloves.

Masks:

Are to be worn while working with hazardous chemicals, biological or unsealed radiological material. Also, when working with any machinery ("on/off" switch).

Long Pants and Closed Toe Shoes:

Are to be worn when in any laboratory

WHY HAVE PPE REQUIREMENTS??

-You are working with hazardous chemicals (some examples below):

- **Formalin**

Acute: May be fatal if inhaled, swallowed or absorbed through skin. Irritation or burns to skin, eyes, mucous membranes and upper respiratory tract.

May cause allergic reactions, coughing, chest pains, pulmonary edema, GI tract disturbance.

Chronic: Carcinogen, Dermatitis, eye damage.

- **Methyl Methacrylate**

Irritant to respiratory system and skin

Highly flammable

- **Chloroform**

Acute: Skin Irritant*, Eye Irritant, Hazardous in case of ingestion and inhalation

- **Methanol**

Eye Irritant, Skin Irritant*, May be fatal or cause blindness if ingested.

*The definition of a skin irritant:

A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact



Table 1. Problems, causes, and recommendations to avoid or reduce low back pain.^{7,11-20}

Problem	Causes	Recommendation(s)
Operator		
• Head forward and flexed	• Head flexed more than 200° ¹¹	• Use 0° to 200° of flexion ^{11,12} • Use magnification loupes to maintain correct posture and focal distance ^{13,15}
• Shoulders tipped forward • Shoulders tipped to one side • Trunk and head twisted	• Bent sitting posture • Right hander leans right and twists to see and reach patient (opposite for left) ¹⁶ • Increased time in rotation increases odds of LBP ¹⁵	• Sit at head of patient to avoid tilting, tipping, and rotation of upper body on pelvis ^{16,17} • Sit with feet flat ¹⁷ • Sit with legs under the patient ¹⁵ • Use safe working range: elbows at sides and shoulders relaxed ¹¹
• Improper sitting causes muscles to work harder than needed (increased curve) OR • Improper sitting decreases flexibility in low back (decreased curve)	• Low back curve increases; too far from the back support • Low back curve decreases; shoulders are slumped and rounded ¹¹	• Adjust backrest for support • Sit all the way back on the seat • Sit with hips slightly higher than knees 5° to 150° • Adjust seat height: feet are flat and correct height to patient ¹¹ • Treatment area at elbow height
• Prolonged static postures • Static postures require more than 50% of body muscles to hold motionless thus are more taxing ⁷	• Sitting or standing for extended time in the same posture. • Immobility decreases oxygen to the muscles. • Prolonged contraction increases chances of tearing, tissue death can result ^{7,18}	• Avoid twisted and tipped postures ¹⁶ • Change posture often, shift feet to shift weight load • Stand when possible ¹⁹ • Use different types of chairs/stools such as chair with back and saddle stool to work different muscles and exert different pressures ^{18,19}
Patient		
• Improper patient positioning	• Positions around the patient's chair (7 o'clock to 8:30 and 3:30 to 5 o'clock); staying in these small ranges is associated with habits such as shoulder and torso twisting ¹⁵	• Position self to work within an expanded range of 8 to 12 o'clock or 12 to 2 o'clock ¹⁵ • Adjust patient for upper (supine) or lower arch (semi-supine) work ¹¹ • Use indirect vision
Equipment		
• Suboptimal light • Suboptimal vision • Improper chair	• Light too close or too far from line sight and treatment object • Head is tilted too far forward • Chair without back	• Position light close to line of sight ²⁰ • Position light within arm's reach ²⁰ • Use of loupes enhances the ability to keep head and neck straight ¹³ • Use a chair with lumbar support • Switch seating often ^{11,12}

Dimensions of Dental Hygiene, January 2011

Table 2. Exercises or activities to reduce or prevent low back pain.²⁵

Exercise Type	Purpose	Activities
Aerobic	• Improve overall conditioning; aid in mild heart and muscle conditioning, maintaining health, and speed recovery from a LBP episode	• Walking, swimming, biking, or walking in waist-deep water • Some type of aerobic exercise daily even a few minutes per day is helpful, gradual increase time • Short walks are good when pain starts
Strengthening	• Improve strength of muscles by repeating a movement • Strengthen back muscles; good for people whose pain is eased by standing and walking • Strengthen stomach and other muscles; good for people whose pain is eased by sitting down	• Focus on back, stomach and legs muscles • Start slow (few repetitions) do not overdo; 5 to 10 minutes per day • Progression; add moderate amounts of weight to legs and arms as the exercises becomes easier Extension exercises (Focus on back) • Lying prone, lift head and shoulders off floor • Lying prone, squeeze buttocks • Lying prone, alternate start, lifting right arm and left leg; alternate Flexion exercises (Focus on stomach) • Lying supine, bend knees, feet flat on floor, do a curl-up (lifting head and shoulders off floor) • AVOID: straight leg sit ups, bent knee sit up or curl up when back pain is acute Leg exercises • Lying supine, knees bent, feet flat, lift hips off floor (bridging) • Sitting or standing, lift knee up (marching) • Lying prone, bend knee and lift leg from hip off floor, alternate legs • AVOID: Lifting both legs when lying supine (leg lifts) when back pain is acute
Stretching	• Improves mobility and flexibility of muscles and supporting tissues; loosen stiff joints and promote ease and smoothness of motion	• Focus on back and legs muscles • Work to hold each stretch for 15 seconds; repeat each stretch 3-4 times Back Stretches • Lying supine, bring knees to chest and hold, slowly lower one leg at a time back down • Sit on the front edge of a secure, non-slip chair; feet flat on the floor, weight evenly distributed, bend from the waist to touch the floor Leg Stretches • Sitting on floor, feet against the wall keeping back straight reach forward with arms towards toes—do not bounce (Hamstring stretch) • Lying prone, bend knee and lift that leg off floor, alternate legs (hip flexors stretch)

Dimensions of Dental Hygiene, January 2011