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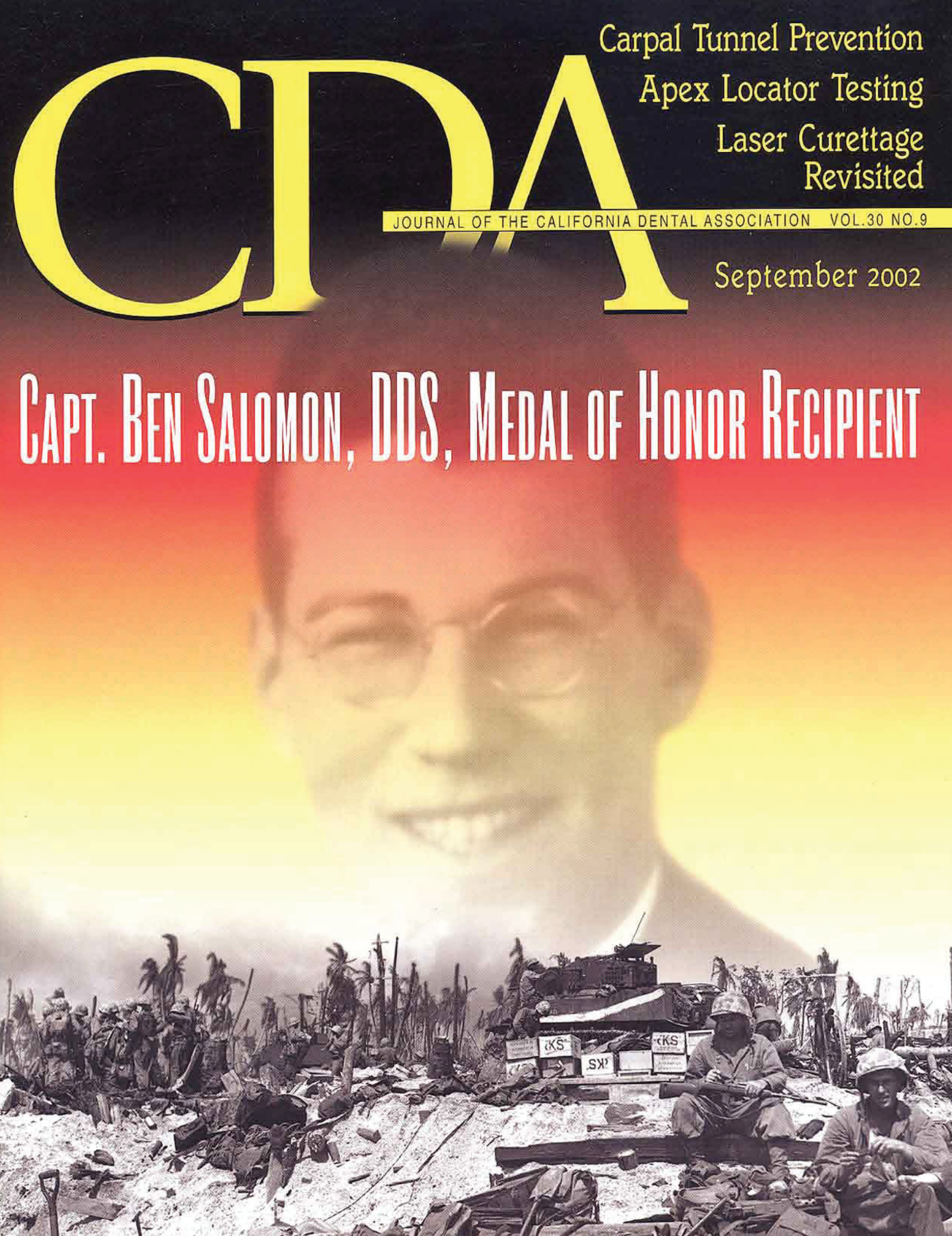
Carpal Tunnel Prevention
Apex Locator Testing
Laser Curettage Revisited

Capt. Ben Salomon, DDS, Medal of Honor Recipient



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DEPARTMENTS

FEATURES

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Good Acronyms

Jack F. Conley, DDS

An acronym, by definition, is a word formed from the initial letter of each of the successive parts of a compound term (or name). Many have been used in dentistry, including such common abbreviations such as DDS (doctor of dental surgery), DA (dental assistant), and RDH (registered dental hygienist), which refer to members of the dental team.

In our experience, acronyms have often been associated with regulations, regulatory bodies, or health care delivery systems. Terms such as OSHA (Occupational Safety and Health Administration), DMFS (Dental Materials Fact Sheet), PPO (preferred provider organization), FFS (fee for service) and HMO (health maintenance organization) are among the most frequently utilized. Sometimes these acronyms have a negative connotation to dentists. Those applied to the delivery systems have additionally been referred to as "alphabet soup."

Our present purpose is to focus on a couple of acronyms that without any doubt have been extremely positive for dentistry in California, MICRA and TDIC. Let us explain. In a news release dated mid-June, the American Medical Association released the results of a 50-state analysis showing that "medical liability has reached crisis proportions in 12 states, with more than 30 others seeing problem signs." The AMA said medical liability insurance (premium), which insures doctors against malpractice lawsuits, could reach as much as $200,000 or more annually for some physicians, such as surgeons or obstetricians. The AMA president noted that as insurance becomes unavailable or unaffordable, physicians would either be forced to limit their services or to leave practice. The release further states that several firms have either failed or have stopped writing malpractice insurance.

Of particular interest is that in medicine, only 5 percent of malpractice cases are taken to trial. Physicians and hospitals apparently want to avoid the negative publicity or expense of lawsuits and trial preparation that they fear would occur if they take cases to trial.

That brings us back to dentistry, and dentistry in California to be specific. Are we likely to be faced with a similar danger to that faced by medicine? While we need to be extremely careful in assuming what the future may hold for fear of setting up a jinx, at the moment, it appears that California dentists are in a very fortunate position for two very important reasons. We must remember that in the 1970s and early 1980s California dentistry experienced its own crisis of rising malpractice costs. While we didn't experience a crisis of the same magnitude as that currently faced by medicine, it brought forth some committed visionary minds to forge some solutions that we continue to benefit from today.

The first part of our solution was MICRA (Medical Injury Compensation Reform Act of 1975), which placed a cap

on non-economic damages of $250,000. We have the hard work of our association to thank for being a major participant, along with TDIC, in the coalition (Californians Allied for Patient Protection -- CAPP), which continues to lobby to maintain the cap. The California MICRA law is currently being discussed by the AMA as a model, in their campaign to urge Congress to develop a Health Act of 2002 to resolve the current malpractice crisis.

MICRA's limit on pain and suffering awards has kept malpractice premium costs down. As a result, it has obviously resulted in keeping all health care costs down, helped to maintain access to care, places a limit on attorney fees and contingency fees, and removed the trial lawyers financial incentive to take on nonmeritorious cases.

In our view however, the bigger story here has been The Dentists Insurance Company. In the first years after TDIC's incorporation in 1980, no one could have imagined the impact and benefit it would eventually have for its dentist shareholders in California. The early years were difficult, but visionary leaders and supportive policyholders nursed the company through the difficult years. As the first dentist-owned professional liability carrier in the country, it helped eliminate the unfair premium practices that CDA members were being subjected to by commercial carriers at the time.

This summer, TDIC announced that it had retained an A.M.Best rating of "A" for 2002. Best cited the company for remaining "dedicated to its policyholders through claims and risk management." In addition to good company management, unquestionably, the many quality educational programs launched by TDIC for the profession and for students has been a major factor in managing risk and reducing liability claims.

Not only has the company provided a stable insurance product for policyholders, but it has provided financial benefit to policyholders, CDA, and the CDA Foundation, in the form of dividends and charitable contributions.

The most recent TDIC support is extremely impressive and worthy of mention. Policyholders have received $39 million in dividends since 1989. Policyholder dividends have been declared in each of the past five years, including the sum of $4.9 million this year alone.

The company made a recent charitable donation to the CDA Foundation, bringing its total contribution to the foundation to almost $1.4 million. These funds assist the foundation in raising awareness of dental disease, improving access to care, and providing scholarships to students seeking dental careers. These contributions to the public and to our future professionals are achievements of which all members of the California Dental Association should be extremely proud. It is a positive accomplishment that contributes to the image of the profession and should not go unnoticed.

The next time we engage in conversation about the negatives that we must endure in our professional world, we must at the same time remember the two acronyms that do so much to protect our liability interests here in California, TDIC and MICRA.

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Speaker Suggests Clowning Around in the Office

By Collette Knittel

If you're cruising down the highway and see a woman driving beside you wearing a red foam clown nose, it may be Fall Scientific Session speaker Christine Holton-Cashen. No, she's not late for her next circus appearance; she just believes in making people smile.

"People have a need for stress relief now more than ever before," she explained. "It's impossible to feel stressed out or angry while wearing a clown nose."

An award-winning speaker, Holton-Cashen will give two presentations at the fall Session on how dentists can incorporate humor into the workplace and how it aids overall office productivity and harmony.

"It's amazing how many people are terrified to see the dentist," she said. "When a dentist has a good sense of humor, it trickles down. The staff is happy and it creates a fun atmosphere, which the patients can sense."

Holton-Cashen told of a dentist's office that had a poster on an operatory wall of the Three Stooges with Curly and Larry pulling Moe's tooth. Another dentist would sit down and greet his patient wearing big goofy glasses and say, "Let's have a look in here. Oops, these are my reading glasses."

Humor comes naturally to Holton-Cashen, since she grew up in a self-proclaimed "family of lunatics." As part of a large Italian family where humor was mandatory, she was shocked when she moved out into the world and found how serious most people are.

"It scared me," she confesses.

She said she feels that, especially in the workplace, people have lost their sense of humor.

Although Holton-Cashen is a natural at tickling funny bones, she said that it is a skill anyone can acquire.

"It's possible to be humorous and light-hearted, even if it's not in your nature," she said. "People don't try it because it's a bit of a risk, but the benefits are on many levels."

"It doesn't have to be anything major," she added. "Humor is not about telling jokes. You can be childlike without being childish. It's a matter of looking at things a different way. It's keeping your stress gauge on low and your fun gauge on high."

In her presentations, Holton-Cashen's goal is to get everyone laughing to the point of tears. She explained that the endorphin release that accompanies a good belly laugh brings on a feeling of calm and relaxation. She also gives 20 humor triggers, or specific things you can do to elicit a smile.

These techniques include keeping a Smile File, making a Good Mood Commitment, and going on a Secret Mission. The Smile File can be filled with patients' thank-you cards and notes, and even letters you've written to yourself.

"I encourage people to send themselves a postcard every time they go on vacation telling about what they've done and closing with 'Wish you were here.' I call it a mini mental vacation. You can even feel the sand between your toes."

Her Good Mood Commitment challenges people to commit to saying they are in a good mood for the first two hours of every day. She said that you have to make a conscious effort not to be brought down by co-worker's complaints, and to tell everyone who asks that you are in a good mood.

"Your brain is like a computer, and it is programmed by the things you say," she explained. "Even if you are feeling lousy, just fake it. Those two hours will set your mood for the rest of the day because you've created it as such."

The Secret Mission technique works particularly well when an office staff member is stressed out or aggravated by a difficult patient. Holton-Cashen suggests you carry a file or something in your hand so that you look busy, or like you are on a mission. Take two minutes and walk around briskly, even though you have nowhere to go.

"Shifting from mental to physical makes a big difference," she explained. "Act very serious, like you have something important on your mind, even though it'll make you laugh on the inside. I call it a two-minute stress buster."

At the upcoming Scientific Session in San Francisco, her first talk, titled "Got Humor? Get Calcium for Your Funny Bone!" will be held on Saturday, Sept. 28, from 9:30 a.m. to noon. It focuses on how humor can enhance brainstorming, increase job satisfaction, create higher productivity, and improve relationships.

Her second talk is from 2 to 4:30 p.m. the same day and is called "Why Can't Everybody Just Get Along?" During this course, attendees will learn the secrets to defuse anyone in any situation, maintain emotional control, and find the perfect words for any discussion.

Holton-Cashen runs her own business, A Dynamic Speaker, and gives talks all over the United States, as well as Canada, South Africa, and Australia. She is a member of the National Speakers Association and holds a bachelor's degree in communication and a master's degree in adult education.

More American Children Have Health Coverage

A new Health and Human Services report shows that American children are significantly more likely to have health

insurance today than in 1997, when the State Children's Health Insurance Program was enacted.

In 2001, 10.8 percent of American children did not have health coverage, down from 13.9 percent in 1997, according to the new report from the HHS's Centers for Disease Control and Prevention. During that period, the number of children without health insurance fell from 9.9 million to 7.8 million. This 21 percent reduction occurred as HHS worked to establish programs in every state to expand health coverage to uninsured children.

"This report shows that governors have turned SCHIP into a genuine success story, with healthier children all across America. Still, we know we must do more," HHS Secretary Tommy G. Thompson said. "We have given governors more flexibility to use SCHIP to expand coverage in their states. We've also asked Congress to give states more time to use unspent SCHIP funds so we can build on our successes in getting children health coverage."

SCHIP is a state and federal partnership designed to help children without health insurance, many of whom come from working families with incomes too high to qualify for Medicaid but too low to afford private health insurance. According to state figures, about 4.6 million children received health coverage through SCHIP at some point in fiscal year 2001. SCHIP plans operate in all 50 states, five territories and the District of Columbia.

Researchers Identify First Case of Periodontitis in Marfan's Syndrome Patient

Researchers from the Eastman Dental Institute at the University College in London identified the first case of severe periodontitis in a person with Marfan's Syndrome, a rare heredity disorder that causes connective tissues to be weaker than normal. The case report is published in the July issue of the Journal of Periodontology.

"Reports of oral findings in Marfan's syndrome patients have focused mainly on skeletal abnormalities. This case is notable since the detected periodontal breakdown was severe and could be only partly explained by known risk factors, such as cigarette smoking and inadequate oral hygiene," said Maurizio Tonetti, DMD, PhD, professor and chair of the Department of Periodontology at the University College London. "It also supports our hypothesis that a variety of connective tissue disorders may increase susceptibility to periodontal tissue breakdown."

An oral examination determined the 41-year-old patient had swollen and receding gums, severe periodontal ligament attachment loss on all teeth, and bleeding gums at 76 percent of the areas examined. The patient had no family history of periodontitis.

"It is important to note that this case report does not show a causal relationship between Marfan's syndrome and periodontal diseases," said Kenneth Bueltmann, DDS, president of the American Academy of Periodontology. "More research needs to be conducted to determine if there is an association between the diseases."

However, Tonetti recommends that Marfan patients follow a preventive oral program based on professional tooth cleaning and daily brushing and flossing, and that they receive regular screenings by a periodontist.

Marfan syndrome is a heritable disorder of the connective tissue that affects many organ systems, including the skeleton, lungs, eyes, heart, and blood vessels. The condition affects both men and women of any race or ethnic group. Scientists estimate that as many as 1 million people in the United States may have a heritable disorder of connective tissue, according to the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Sensitivity to Culture Important Part of Providing Care

With new immigrant groups flocking to the United States each year, it becomes more challenging and important for health care professionals to be sensitive to cultural and religious traditions while still providing optimal care, Julie A. Brow wrote in the May/June 2002 issue of the Dental Assistant.

Dentists and their staffs must work together to ensure that patients feel understood and respected, Brow said. One of the most common complaints of patients is that no one listens to them anymore. By listening to patients, dentists can learn valuable information that can alleviate cultural conflicts that may arise over the course of treatment.

Sometimes listening is not enough, Brow said, and other tools must be used. In some instances, patients will cite religious reasons for not having a procedure done, but those reasons may turn out to be erroneous and show a lack of understanding of their own religious doctrine. Brow said it is important to be respectful and nonjudgmental when confronted with this possibility and for the dentist to ask if he or she might speak with the patient's religious leader on the patient's behalf.

Another key component to providing good patient care to a culturally diverse population is being proactive and learning as much as possible about the cultural heritage, beliefs, and customs of patients. Brow said misunderstanding other customs can create a breach of the trust needed between a patient and dentist for effective care.

Fixing Fillings the Natural Way

Researchers at the University of Texas Health Science Center at San Antonio have identified specialized protein cytokines that stimulate odontoblasts.

Mary MacDougall, PhD, associate dean for research and professor of pediatric dentistry and H. Ralph Rawls, PhD, professor of biomaterials in the Department of Restorative Dentistry, have developed a liquid "carrier" system to deliver the cytokines to the site of a cavity, reports an article in the June 2002 The Mission,

publication of UTHSC.

They noted that the usual filling materials, amalgam or tooth-colored composites, are not perfect solutions; and the liquid carrier system helps preserve the cytokines and stimulates dentin formation.

Rawls said tertiary dentin is the tooth's own natural defense mechanism, and over time a tooth will naturally produce tertiary dentin, which forms a barrier against bacteria leaking into the pulp.

"Stimulating this natural repair mechanism is the first step toward being able to replace part of the tooth with its own natural material," Rawls said.

"This is the body's own natural process," MacDougall said, "We are just enhancing it."

Jigsaw Puzzles A Guide to Life

Everything I needed to know about life, I learned from a jigsaw puzzle, wrote editor Jeffrey B. Dalin, DDS, in St. Louis Dentistry, June/July 2002.

- Don't force a fit. If something is meant to be, it will come together naturally.
- When things aren't going so well, take a break. Everything will look different when you return.
- Be sure to look at the big picture. Getting hung up on the little pieces only leads to frustration.
- Perseverance pays off. Every important puzzle went together bit by bit, piece by piece.
- When one spot stops working, move to another. But be sure to come back later.
- The creator of the puzzle gave you the picture as a guidebook.
- Variety is the spice of life. It's the different colors and patterns that make the puzzle interesting.
- Working together with friends and family makes any task fun.
- Establish the border first. Boundaries give a sense of security and order.
- Don't be afraid to try different combinations. Some matches are surprising.
- Take time to celebrate your successes ... even little ones.
- Anything worth doing takes time and effort. A great puzzle can't be rushed.

Associate Buy-ins a Viable Option for New Dentists

Although associate buy-ins are more complex than outright practice purchases and sometimes result in the associate not buying into the practice, the associate buy-in remains a viable option for many new dentists, wrote Larry R. Domer, MBA, in the spring 2002 issue of New Dentist.

Domer defined an associate buy-in as a transition strategy that includes a formal associateship phase followed by the associate purchasing a portion of the practice. An associate buy-in implies that the associate and practice owner will become co-owners of the practice.

Domer said that an associate buy-in differs from a simple associateship because of the intent of the parties: that the associate dentist eventually becomes a co-owner of the practice.

An important advantage of an associate buy-in is that it provides a trial period for both the associate and the owner. According to Domer, this trial period provides the owner with first-hand information concerning the associates's clinical capabilities, philosophy of practice, management skills, and compatibility with patients and community.

Another advantage of a buy-in for an owner dentist is that it allows the owner to begin phasing out of practice, reducing the number of days practiced per week, while retaining control of the practice. Domer said a buy-in also helps to preserve the value of the practice during the phase-out process.

Another advantage of the buy-in is that the arrangement can provide security and comfort for the owner dentist and family as well as the associate. Domer said there is usually a buy-sell agreement between the associate and the owner (and later the co-owners) that provides for the mandatory sale of the practice, or portion of it, to the associate or new partial owner in the event of permanent disability or death of the original owner.

In some cases, Domer wrote, a practice is too large or too unusual for a new dentist to purchase or for a senior dentist to sell outright to one dentist. An associate buy-in may be the only way an owner can sell a large general practice or specialty practice. And, Domer said, it may be the only way a new dentists can finance and learn to run a large practice before full ownership.

Modified Yogurt Bacterium Works Against Tooth Decay

Researchers have genetically modified a common bacterium found in yogurt to fight the Streptococcus mutans bacterium that can cause tooth decay, the Karolinska Institute in Stockholm reported.

According to a report in Nature Biotechnology, researchers modified the Lactobacillus zeae bacterium, which is responsible for the fermentation process in dairy products, to carry an antibody against S. mutans. They said the antibody works by sticking to the S. mutans molecule that normally sticks to teeth, causing the two species to clump together and go harmlessly down the throat.

In a trial using laboratory rats, animals whose mouths were swabbed with the modified bacteria showed a sharp reduction in S. mutans in the mouth and developed fewer cavities compared with untreated animals. The researchers believe the antibody might also have the secondary effect of killing the streptococcus bacteria with the lactic acid the lactobacilli produce.

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The Karolinska team is also investigating how to modify the lactobacilli bacteria with antibodies to work against a range of infectious agents including rotavirus and helicobacter, agents that cause severe diarrhea and stomach ulcers.

Correction

Scott Jacks, DDS, was incorrectly referred to as a general dentist in the July 2002 issue of the Journal. Jacks is a pediatric dentist.

Honors

John C. Greene, DMD, of San Rafael, has been chosen to receive the Oral Health America Tuttle Award for leadership in spit tobacco education and prevention.

Theodore T. Fortier, DDS, was recently appointed as commissioner to a second term on the West Vector Control Board, an Los Angeles County Agency. PHOTO

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Dentist Hero Finally Awarded Congressional Medal of Honor

COLLETTE KNITTEL

AUTHOR

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The story unfolds on a battlefield in Saipan and concludes in the White House Rose Garden, but what lies in the middle is an incredible string of events that revised American history. The main characters are dentists: two men who never meet, yet their lives are forever intertwined. The story tells of war, death, valor, perseverance, and honor regained. And the story is true.

During the years just prior to World War II, a man named Benjamin Salomon found himself newly graduated from the University of Southern California School of Dentistry and eager to serve his country. In 1937, he applied for a commission as an Army dentist, but his application was denied due to a lack of need for service dentists. Instead, Salomon opened a private practice in Los Angeles until the political climate changed.

In 1940, President Franklin Delano Roosevelt signed the Selective Service Act, which required men age 21 to 35 to register for military training. Salomon signed up and was immediately called into the Army as a private of the infantry. Assigned to the 102nd Infantry Regiment in Fort Ord, Calif., near Monterey, Salomon reported for duty with his dental instruments in hand. While discovering his inclination for military service, he spent his spare hours scaling the teeth of the men in his platoon. On weekends, he would drive a group from his regiment down to his Los Angeles practice for free dental care and have them back in time to report for duty on Monday morning.

After the attack on Pearl Harbor, Salomon's platoon shipped out to Christmas Island, south of Hawaii. Here, he spent considerable time developing his skills as a soldier. His commanding officers described him as the best all-around solider on the island. Within a year, he was a sergeant in command of a machine-gun section in his heavy-weapons company.

Salomon's combat training was cut short when the government switched plans on him; and by August 1942, he was transferred to the 105th Infantry Regiment in Hawaii, where he was Lt. Salomon, the regimental dentist. He not only cared for the dental needs of his men during the mornings, but he also served as an infantry instructor in the afternoons. In the 105th, the regimental dentist also won most of the infantry proficiency competitions. Within a year, Salomon was promoted to the rank of captain.

On June 15, 1944, the 105th landed on Saipan, Marianas Islands, where the Japanese army had been reduced from 30,000 troops to 9,000 troops with a

limited weapons supply. Refusing to surrender, approximately 5,000 Japanese troops advanced on the American soldiers one last time on July 7, the day Salomon fought his first and last battle. According to information from the U.S. Army Center for Military History, it was one of the largest attacks attempted in the Pacific Theater during World War II. In the first minutes of the attack, approximately 30 wounded soldiers walked, crawled, or were carried into Salomon's aid station; and the small tent soon filled with wounded men.

As Salomon struggled to work on his men, he looked over and saw a Japanese soldier bayoneting one of the wounded soldiers lying near the tent. He turned around and saw two more Japanese soldiers appearing in the front entrance to the tent. As he grabbed a wounded soldier's rifle and fired on the enemy soldiers, four more crawled under the tent walls. Rushing them, Salomon kicked the knife out of the hand of one, shot another, and bayoneted a third. He butted the fourth enemy soldier in the stomach and a wounded comrade then shot and killed the enemy soldier.

Dr. Benjamin Salomon's photo appeared in the 1937 USC yearbook, El Rodeo.

Walking outside, Salomon saw that the machine-gunners protecting the tent were dead. Realizing the severity of the situation, he returned to the tent and ordered the wounded to try to get back to the regimental aid station, while he attempted to hold off the enemy. He was heard to say to the others in charge, "Everybody's dead out there. I can do these guys more good out there than I can in here. I'll hold them off until you get them to safety. See you later."

That was the last time anyone saw Salomon alive. The regimental historian, Capt. Edmund J. Love, was present the next day when they found Salomon's body bent over a machine gun, his finger still on the trigger.

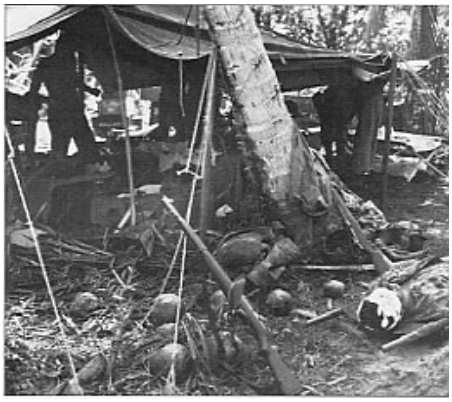
Love later wrote, "The Japanese dead lay scattered before him like trees felled by a tropic storm." He counted 98 Japanese bodies in front of Salomon's position. Salomon himself had 76 bullet wounds in his body.

Because of his heroic effort, Salomon was recommended for the Congressional Medal of Honor.

According to the Congressional Medal of Honor Society's Web site, the Medal of Honor is the highest award for valor in action against an enemy force that can be bestowed upon an individual serving in the Armed Services of the United States. In Allen Mikaelian's book, Medal of Honor: Profiles of America's Military Heroes from the Civil War to the Present, Mike Wallace of TV's "Sixty Minutes" points out in the Introduction the special circumstances required to be eligible for this prestigious award. "To my surprise, I learned no one can receive a Medal of Honor for having acted under orders, no matter how heroically he carried out those orders, for the medal is reserved strictly for those who act of their own accord and out of complete selflessness. It is those rigorous conditions that set the Medal of Honor apart from all other military citations."

However the proposed citation for Salomon was returned by the commanding general with the following message, "I am deeply sorry that I cannot approve the award for this medal to Capt. Salomon, although he richly deserves it. At the time of his death, this officer was in the medical service and wore a Red Cross brassard upon the sleeve of his

Marines run for cover during battle in Saipan. These are the kinds of conditions under which Capt. Salomon treated soldiers and ultimately earned his Medal of Honor.



Dr. Salomon treated wounded soldiers in a medical tent like this one. He died outside a medical tent, providing cover for his patients so they could escape the Japanese.

uniform. Under the rules of the Geneva Convention, to which the United States subscribes, no medical officer can bear arms against the enemy."

50 Years Later ...

Half a century later, an informal gathering of USC School of Dentistry alumni, including Robert West, DDS, of Calabasas, Calif., were amassing stories, memories, and photos for their centennial celebration. West, a 1952 graduate who served during World War II as a medical and dental corpsman, came across documentation of Salomon's story submitted by 1936 graduate Harry Cimring, DDS. West began his own research, and what he found only increased his resolve to add the heroic dentist's name to the pages of history.

West's dogged efforts and careful study proved that the denial was not in fact based on a technicality, but on an error. He found that Article 8 of the Geneva Convention of 1929 specified that medical personnel were prohibited from bearing arms against the enemy for offensive purposes, but they could bear arms in self-defense or in defense of the wounded or sick. It became blatantly apparent to West that the recommendation for the Medal of Honor for Salomon was denied by the commanding general due to his misinterpretation of the Geneva Convention. Now all he had to do was make the leaders of the United States concur.

"This was an error in the history of our nation," West explained. "I became obsessed. It had to be fixed."

West commenced his letter-writing campaign on July 7, 1997, 53 years to the day after Salomon had engaged in the selfless act of valor that would cost him his life. West's correspondences started with his congressman, Brad Sherman (D-24th), and included Maj. Gen. John Cuddy, who was then chief of the U.S. Army Dental Corps; Col. Marvin Bennet, USAF, senior consultant for dentistry, Office of the Assistant Secretary of Defense; and Maj. Daniel B. Gibson, chief of the U.S. Army Military Awards Branch, among many others.

Over a year later, West received his first glimmer of hope. It was a letter from Maj. Gen. Patrick D. Sculley, new chief of the Army Dental Corps. His letter thanked West for his persistence and went on to state, "the testimonies of Captain Salomon's heroic actions on July 7, 1944 in Saipan make me proud to serve our great country in the fine tradition of the United States Army and as a commissioned officer of the Dental Corps. As chief of the Dental Corps, I want to assure you that I am following this recommendation for Captain Salomon's Medal of Honor very closely and look forward to the day when it is finally approved."

During West's attempt to add his fellow alumnus to the list of Medal recipients, there was another potential hold up; the statute of limitations on receiving the Congressional Medal of Honor had run out. Not to be deterred, West approached Congressman Sherman on the matter, and Sherman proposed a waiver that was later approved by Congress.

"I never once thought of giving up," West said. "What stuck with me was the fact that, when Capt. Ben left that tent, he must have known he was going to die, and yet he never hesitated. He was a true hero."

In December 2001, West received a phone call from Sculley stating that it was merely a matter of time before Salomon's medal was awarded. Sculley was due to retire in June 2002, and told West that he would love to have the Medal awarded during his watch, as Salomon would be the first Army dentist ever to be awarded the Congressional Medal of Honor.

On April 18, West received the assurance he had been seeking for almost five years. A representative from the Army Pentagon called and said President George W. Bush would be presenting Salomon's Congressional Medal of Honor in a Rose Garden ceremony on May 1.

During West's four-day trip to Washington, D.C., he and his wife and daughter were escorted by Col. Larry Cook, an Army dentist from the Pentagon. Cook spoke highly of both West and the ceremony honoring Salomon.

Marines run for cover during battle in Saipan. These are the kinds of conditions under which Capt. Salomon treated soldiers and ultimately earned his Medal of Honor.

"Dr. West's perseverance and dedication are remarkable," he said. "His work honors the memory of Capt. Salomon, the Army, and the dental profession."

"It was a glorious day in Washington," Cook added. "The Medal of Honor ceremony in the Rose Garden and the Hall of Heroes reception at the Pentagon capped off the celebration of a true American hero."

An only child of parents who died

Secretary of the Army Thomas White, Dr. West, Army Chief of Staff Gen. Shinseki, and Sgt. Maj. Tilley (from left) appear at the Hall of Heroes ceremony at the Pentagon.

years ago, Salomon never married or had children of his own. Genealogical searches have produced no other living relatives. Salomon's ashes, as well as those of his parents, are interred in Forest Lawn Memorial Park in Glendale, Calif.

"No one who knew him is with us this afternoon," said President Bush at the ceremony. "Yet Americans will always know Benjamin Lewis Salomon ... as the match for 100 [enemy soldiers], a person of true valor who now receives the honor due him from a grateful country."

At the Medal of Honor ceremony, West and John Ingle, DDS, dean of the USC dental school from 1964 to 1972 who had attempted to have the Medal bestowed upon Salomon years before, accepted the posthumous award on behalf of their fellow hero dentist.

"Finally receiving the Medal on Dr. Ben's behalf was indescribable," West said. "When I had the chance to converse with our president in the Oval Office before the ceremony, I told him that I knew Dr. Ben was up there smiling down on us."

West then presented the Medal to Sculley for permanent placement in the Army Medical Department Museum in San Antonio, Texas. A replica of the Medal will be housed at the USC School of Dentistry.

"The tenth of May was the most memorable day in my life as it entailed the many ceremonies of my retirement from the Army," Sculley said. "The ultimate event of that day was when I presented Capt. Solomon's Medal to the Army Medical Department Museum. I am sure my pride was evident as Ben's Medal was enshrined with the mementos of the other great heroes of the Army Medical Department. His legacy is now on display to remind us all that freedom requires sacrifice; and there are some like Capt. Ben Solomon, U.S. Army Dental Corps, who were willing to make the ultimate sacrifice."

Dr. West presents the Medal of Honor to Major. Gen. Patrick D. Sculley, then chief of the Army Dental Corps.

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Cumulative Trauma Injury – Carpal Tunnel Syndrome

Randy Q. Ligh, DDS

ABSTRACT In discussing cumulative trauma injuries all three contributing factors should be considered: the worksite environment, the job, and the worker. Research and the literature have an abundance of information discussing ergonomics and its relationship to the worksite environment. Preventive exercise information is limited. The author summarizes preventive measures using the acronym R.E.S.T. Exercise supporting this preventive philosophy are presented pictorially and descriptively.

AUTHOR

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From their most recent year of statistical reporting (1999), the Bureau of Labor Statistics claims there were 582,300 musculoskeletal disorders that resulted in employees missing time from work.1 Most dentists are self-employed so the total number of disabling musculoskeletal injuries that actually occur in dentistry are not reported to the Bureau and may be more than what is documented.

One-third of all disability claims are hand, wrist or upper extremity cumulative trauma injuries according to Zenith, a workers' compensation insurance provider. According to Dave Strong, MPH, CLII, of Zenith's safety and health department, cumulative trauma in upper extremities accounts for half of workers' compensation costs.2

If a dental employee is not allowed to perform his or her normal job because of a cumulative trauma injury, the insurer could disburse about $23,000 to a dentist, $14,000 to a hygienist, $11,000 to a bookkeeper, $7,000 to a receptionist and $6,000 to a dental assistant in guaranteed wages.3 Of course, there would be additional costs and downtime to interview, seek and train a new employee replacement.

A survey reported by the American Dental Association in 1997 reported that 9.2 percent of dentists had been diagnosed by a physician as having some type of repetitive motion injury.4,5 An affected dentist might incur the personal expense of medical diagnosis and treatment, physical and occupational therapies, rehabilitation, possible pharmacological or surgical intervention and a potential career ending disability.

In discussing cumulative trauma injuries all three contributing factors should be considered: the worksite

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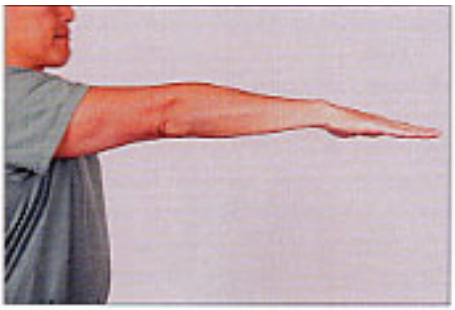

Figure 1.

Figure 2.

Figure 3.

Figure 4.

Figure 5.

Figure 6.

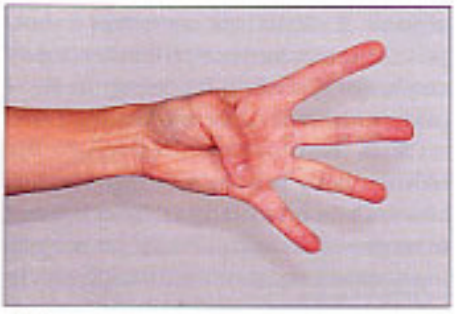

Figure 7.

Figure 8.

environment, the job and the worker.2,6 Research and the literature have an abundance of information discussing ergonomics and its relationship to the worksite environment.7-11 Primary risk factors related to the job such as forceful exertions, repetitive motions and awkward or static postures have been discussed in the literature.7-9 Secondary risk factors related to the job such as contact stresses, vibration, cold temperature and personal factors have also been discussed in the literature.11-14

The literature also delves into a host of surgical and nonsurgical treatment options. Physical and neuromuscular therapy, acupuncture, reflexology, microcurrent electrical stimulation, spinal manipulation, and splint therapy are to name a few.12,15,16 Medication in the form of aspirin or other nonsteroidal antiinflammatory drugs17 or corticosteroids and cortisone-like medications are also considered.18

The dental literature has very little preventive information dealing with activities "outside" of the job analysis to benefit the worker.19 Why do we wait until symptomatolgy occurs before we address proactively the issue of cumulative trauma injury?

In a profession that bases its philosophy on prevention, it seems myopic to disregard or leave to serendipity the possibility of cumulative trauma injury and not institute personal measures of prevention.

Before embarking on this proposed preventive approach toward cumulative trauma injuries a thorough medical evaluation should be done with your physician. Any contraindications should be heeded and recommendations followed.

The medical conditions that might underlie cumulative trauma injuries include obesity,20 diabetes mellitus, hypothyroidism, the use of birth control pills, premenstrual syndrome and pregnancy.15,21 Cumulative trauma injuries might arise as a result of the potential for fluid retention and possible relative or absolute nutrient deficits related to these conditions.16 Vitamin

Figure 9.

Figure 10.

Figure 11.

Figure 12.

B6 deficiency has been linked with carpal tunnel syndrome.15,16

Other medical conditions such as sarcoidosis, rheumatoid arthritis, osteoarthritis, gout, acromegaly, amyloidosis, tumors, Paget's disease of bone, fractures and dislocations may also provide contributory influences for cumulative trauma injures.15,21 They are more likely to induce cumulative trauma injury by more direct mechanical factors with fluid retention and nutrient deficits playing a more minor role.16

Recurrent symptoms of tingling, itching, pain or burning sensations, stiffness, cramping, weakness, numbness or decreased sensation to touch should not be handled in a cavalier manner.18,22 Symptoms may begin suddenly or gradually. Don't try to "work through" the suspicious symptoms. The basis behind a preventive approach is to avoid a condition and not to aggravate a predisposing situation24 or to even cause a condition by exceeding a "quantitative threshold"25 above which a cumulative trauma condition would be expected to occur.

The American Heart Association, the National Institute of Health, the United States Department of Health and Human Services, the President's Council on Fitness and Sports, the Office of the Surgeon General and the American College of Sports Medicine all strongly support the role of physical activity for maintaining good health.26-28

Ideally supervision by a trained/certified professional (health fitness instructor/personal trainer) is prudent. As a practicing dentist and a certified health fitness instructor, I have coined an acronym, which summarizes the preventive measures to implement. The acronym is R.E.S.T. The components of R.E.S.T.will be described.

R -- Rest your muscles to allow them to recuperate from their daily repetitive stresses.

E -- Exercise your muscles to allow them to become stronger and better able to withstand future repetitive stresses.

S -- Stretch your muscles to maintain your flexibility and range of motion. Stretching also improves blood flow to the muscles.

T -- Train specifically those muscles you are targeting to prevent and to avoid those conditions which we are concerned about (cumulative trauma injuries involving the upper extremities).

If a cumulative trauma injury is suspected do not attempt the following exercises until specific advice or clearance is given by a physician.

Exercises

Figures 1 and 2.

Hold your arms straight out in front of you. Rotate your arms so the backs of your hands face each other.8,29,30 Hold for 5-10 seconds.

Figure 3.

Hold your hands straight out in front of you. Rotate your arms so the palms of your hands face up.8Õ29Õ30

Hold for 5-10 seconds.

The radio-ulnar pronator and the radio-ulnar supinator muscles are alternately stretched and contracted. 31

Figure 4 - Figure 5

Clench your fist as tight as you can and then release and fan out your fingers as far as you can. Repeat 5-10 times.

The lumbricalis, flexor digitorum superficialis, flexor digitorum proflindus and interossei muscles are alternately stretched and contracted.35

Figure 6

With the fingers of one hand, grab each finger on the other hand and individually pull gently the fingers into an extension. Include the thumb in this exercise.23 Hold each stretch for 5-10 seconds for each finger in both hands.

There are no muscles within the hand

that flex the interphalangeal joints of the fingers or thumb. Instead, muscular contraction within the forearm is transmitted to the fingers of the hand by way of the flexor 35,36 digitorum profundus, flexor digitorum superficialis and flexor pollicis longus tendon to produce flexion. The tendons of these flexor muscles attach to various places on the hands and fingers and all of them cross the wrist through a small space known as the carpal tunnel.37 If the tendons become swollen or inflamed they can compress the blood vessels and/or median nerve as they pass through the tunnel.38

In this exercise the flexor muscles of the forearm (mentioned above) and their tendons are stretched.

Figure 7-Figure 8

Stretch your thumb across the palm of your hand towards the base of your little finger as far as you can and hold for 5 seconds. Then extend your thumb outward and hold for 5 seconds. Repeat 5 times for each hand.

In this exercise the flexor pollicis longus of the forearm and the abductor pollicis brevis,abductor pollicis longus, flexor pollicis brevis, opponens pollicis and adductor pollicic muscles are alternately stretched and contracted.35

Figure 9-Figure 10

Place the palms of your hands together in front of your chest with your fingers extended upward (prayer position) and then raise your elbows so your wrists are being stretched and hold for 5 seconds.

Repeat 4 times.

In this exercise the muscles on the anterior forearms (flexor carpi radialis and flexor carpi ulnaris) are stretched while the muscles on the posterior forearms (extensor carpi radialis brevis and longus and extensor carpi ulnaris) are contracted.

Figure 11 - Figure 12

Hold the exercising arm in front of you with your elbow straight. Position your hand with your palm face down and fingers extended. Bring your palm back toward your body. With the nonexercising hand, reach around the top of the fingers of the exercising hand and gently assist with a little pull back toward the body.30 Hold for 5 seconds and repeat 4 times for each hand.

In this exercise the muscles on the posterior forearms (extensor carpi radialis longus, extensor carpi radialis brevis and extensor carpi ulnaris) are stretched while the wrist flexor muscles (flexor carpi radialis and flexor carpi ulnaris) are contracted.

Figure 13

While standing or sitting, drop your arms to your sides. Gently shake out your anns and hands for a few seconds, relax and repeat. Breathe slowly and deeply.

This exercise allows for the muscles of the shoulder, back, and upper extremities to relax and relieve tension. Circulation is enhanced in the shoulder (gleno-humeral) joints.

Figure 14-Figure 15

Stand upright. Shrug your shoulders and roll them forward and then roll them backward with your arms at your sides. Repeat 2 sets of 5 repetitions.

In this exercise the serratus anterior, pectoralis minor along with the trapezius, rhomboids and levator scapulae are contracted.

Figure 16

Stand with your feet separated and your arms by your sides. Lift one arm, with the elbow bent, and raise it across your chest over the opposite shoulder until your hand reaches down your back. Use the other hand

to give a gentle assist at the elbow at the end of the movement.22 Repeat 4 times for a count of 5 seconds on each side.

In this exercise the external shoulder rotators (teres minor and infraspinatus) along with the posterior deltoid are stretched. The pectoralis major, anterior deltoid, subscapularis and coracobrachialis muscles are contracted.

Figure 17

Utilizing a small ball made of foam, soft rubber, moldable putty or sponge-like material compress material for 3 seconds and then relax. Repeat 5 times for each hand.

This exercise alternately contracts and relaxes the muscles of the hand and forearm. Blood flow is also facilitated to these muscles by the alternate pumping action. Sponge balls are available in different sizes (0.7 kg to 3.6 kg) each necessitating a different compression force.42

None of the previously mentioned stretches or exercises should cause pain or discomfort. Overzealous efforts should be avoided. Moderation is the key.

Cumulative trauma injuries are usually an overuse injury as a result of activities both on and off the job.43 Practice prevention for your hand, wrist and upper extremities to reduce the risk of cumulative trauma at all times.The body does not differentiate cumulative trauma inflicted on itself as a result of work or playThere are factors to help prevent the occurrence of injuries. Prevention is following my previously stated acronym REST. both at home and at work.

R (Rest) Pay attention to signals the body may be sending. The first of which is often fatigue. Take a break from the routine you might be subjecting yourself to in order to improve circulation, change position or to restore range of motion (stretching).

E (Exercise) Overuse ~ is a relative term. If someone makes it a habit to exercise to keep your hands, wrist and upper extremities strong and flexible, they would ultimately be able to handle a greater workload. Their tolerance or "overuse" limit would be greater than a non-exercising individual.

S(Stretch) No matter how ergonomically designed and seemingly

Figure 13.

Figure 14.

Figure 15.

Figure 16.

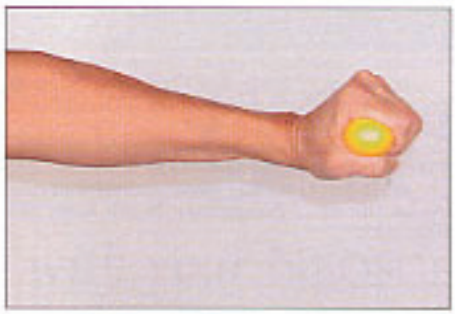

Figure 17.

comfortable your work environment is, repetitive motion task will fatigue and tighten up specific muscles you are abusing. Use every excuse to stretch and maintain your range of motion. This also facilitates circulation.

T(Train) If we are aware that in our profession we are vulnerable to cumulative trauma injuries (carpal tunnel injuries), we should proactively train those muscles and areas that could be affected. The exercises I have described and demonstrated "train" those specific areas.

We do know that an increased frequency of strengthening exercises seems to be associated with a decreased risk of musculoskeletel syndromes among dentists." Some of the physiologic benefits of "preventive interventions" is discussed in Hansford's article.45 Significant reductions in lost-time injuries ranging from 56%-9 1% have been demonstrated in companies utilizing "workplace preventive programs." 46 Successful strategies and outcomes have been documented and followed in workplace preventive approaches. A ten-year experience history at nearly 300 companies throughout the United States successfully supports prevention strategies.[48]

CONCLUSION

It seems prudent to acknowledge potential problems as a result of our lifestyles whether this is personal or professional. Acknowledgement alone without personal behavioral efforts to prevent or mitigate injury is potentially self-destructive and blindly irresponsible.

Using R.E.S.T. as a guideline and following the previously mentioned and described exercises will hopefully help the dental professional avoid functional impairment with all of its long-term and often permanent negative consequences.

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The Accuracy of the Neosono Ultima EZ Apex Locator Using Files of Different Alloys: An In Vitro Study

M.H. Nekoofar; K. Sadeghi; E. Sadighi Akha; M. Sadegh Namazikhah, DMD

ABSTRACT The purpose of this study was to compare the precision of the new generation of root canal measuring devices, Neosono Ultima EZ, while using files manufactured of different alloys. Fifty-four root canals of extracted teeth were chosen. They were placed in special tubes with roots immersed in 2 percent agar with phosphate buffered saline. The device was used to locate the apex of each canal in wet conditions at the zero digital reading, first using a stainless steel file and then using a nickel-titanium file. These values were compared to the actual lengths obtained by measuring the distance of the coronal reference point to the apical opening with a size 10 file minus 0.5 mm. The accuracy of the device was 94 percent with nickel-titanium files and 91 percent with stainless steel. No significant difference was noted between the results for either file. The accuracy of the Neosono Ultima EZ in wet conditions exceeded 90 percent regardless of the alloy used.

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Successful root canal therapy depends upon complete and accurate biomechanical preparation followed by a three-dimensional obturation of the root canal system without injuring the periapical tissue.1 To attain these objectives, the endpoint of the root canal system should be detected carefully prior to preparation of the canal. The ideal apical endpoint of a root canal is considered to be the apical constriction or cementodentinal junction of a tooth with completed root formation.2

Although radiography is an indispensable part of endodontic therapy and is used in a variety of ways to determine working length, techniques formulated to calculate it have not been shown to be accurate due to technical limitations. Moreover, the operation takes a considerable amount of time. In addition, patients, particularly those who are pregnant, increasingly express concern about the possible hazards of radiation exposure.

Because of the technical problems, time consumed, and hazards of radiation, the technique of electronic working length determination has recently gained considerable popularity among both general dentists and endodontists.

The scientific rationale for the function of electronic root canal length measuring instruments is based on pioneer studies by Suzuki (1942) and Sunada (1962). The latter found that the electrical resistance between periodontium and oral mucosa is constant at approximately 6.5 kΩ regardless of the age of the patient or the type or shape of the tooth.3 On the basis of this concept, resistance-type apex locators were manufactured and introduced into the market.

Further development of apex locators has resulted in units that operate by measuring changes in impedance across the wall of the root canal by applying two different frequencies to a file and measuring the difference between them. As a file is advanced apically, the difference in the impedance values begins to become greater and is maximally different at the apical constriction.4

Manufacturers claim that third-generation apex locators locate the apical foramen in the presence of moisture, pulp tissue, blood, exudates, or solutions such as sodium hypochlorite or EDTA. They also claim that no special instruments are necessary to operate the device; a standard endodontic file is used as the intracanal probe.5

Dental literature is replete with studies evaluating the influence of pulp status,6,7 tooth type,8 apical foramen diameter,9 type of irrigation solution,10 size of the master apical file,11 and recapitulation12 on the accuracy of apex locators.

For this study, a third-generation electronic apex locator, Neosono Ultima EZ (Amadent, U.S.) was chosen. The purpose of this study was to evaluate the reliability of the apex locator in a moist environment in an experimental model while using files manufactured of different alloys.

Materials and Method

Experimental Device

Ultima EZ, a dual-circuitry third-generation apex locator, was chosen (**Figure 1**). This particular apex locator uses multiple frequency technology for measurements in wet conditions and a second resistance-based circuitry for measurements in dry canals. The locator has a digital distance readout and an audible indicator for determining when the desired point in the canal has been reached.

Experimental Model

The in vitro model used in this experiment was introduced by Aurelio and Nahmias.13 It consisted of a polystyrene tube containing 2 percent agar in phosphate-buffered saline with the roots of extracted teeth immersed in the medium, and the crowns fitted at the cervical area in a opening in the cap of the tube. A 3/4-inch nail extended from the medium through the sides of the tube, acting as an electrode.

Experimental Group

Fifty-four root canals of extracted human teeth were selected. They were constantly hydrated during storage. The teeth were soaked in 5.25 percent sodium hypochlorite for three hours to remove periodontal ligament. Stains and calculi were removed with scalers and curettes. The teeth were inspected for root fractures and evidence of incomplete root formation, and any suspect teeth were discarded.

Method

The incisal edges of each tooth were ground lightly with a grinding wheel to create a flat surface to simplify length measurements. A coronal access opening for each tooth was created in the standard manner. Each tooth was placed into its own experimental model using the method described earlier. Based on the authors' pilot study, a 2 percent concentration of agar was used; and after 55 seconds, complete moisturizing of the root canals was recorded as a result of seepage of fluid into the canals through the apical foramen. By means of an alligator clip, the lip clip of the unit was connected to the nail at the base of the experiment model.

Figure 1. Ultima EZ dual-circuitry third-generation apex locator.

The apex of each canal was located, first using a stainless steel file (Thomas, France) and then a nickel-titanium file (Nitiflex, Dentsply Maillefer, Switzerland). Each file was slowly inserted into the canal until the digital reading on the apex locator was 0.0. The rubber stop was adjusted to the flattened coronal or incisal tooth surface. The file was then removed from the tooth, and the length was measured to the nearest 0.5 mm. This length was termed the electronic working length. All measurements were verified three times before being recorded. The teeth were then removed from the model, and the file was reinserted into the canal until the tip was just visible at the apical foramen with a magnifier (2x). The rubber stop was placed to the flattened coronal or incisal surface, the file was removed, and the length was recorded to the nearest 0.5 mm. This length minus 0.5 mm was termed the actual root canal length. These values were compared with each other, and the differences were recorded.

Results

Under the conditions of this experiment, using Ni-Ti files, the electronic working length of 66.6 percent of the root canals (36 root canals) was found to equal the actual root canal length. In 14.8 percent (eight root canals), the electronic working length was 0.5 mm shorter than the actual root canal length. In 13 percent (seven root canals) the electronic working length was 0.5 mm longer than the actual root canal length. The endodontic file tip protruded beyond the foramen in 5.6 percent (three root canals). The overextended cases were 1 to 2 mm longer than the actual root canal length. These results show that in 94.4 percent (51 root canals) the Ultima EZ apex locator measurements, using Ni-Ti files, were within ± 0.5 mm of the actual root canal length.

Under the conditions of this experiment, using stainless steel files, the electronic working length of 57.4 percent of the root canals (31) was found to equal the actual root canal length. In 9.25 percent (five root canals), the electronic working length was 0.5 mm longer than the actual root canal length. The endodontic file tip protruded beyond the foramen in one root canal and did not reach the foramen in three root canals. The overextended case was 1 mm longer than the actual root canal length and the underextended cases were 1 mm shorter than the actual root canal length. These results show that in 91.6 percent (50 root canals) the Ultima EZ apex locator measurements, using stainless steel files, were within ± 0.5 mm of the actual root canal length.

The results obtained were compared using the Wilcoxon signed-ranks test. No significant difference was noted between the results for either file.

Discussion

It is general opinion among the dental profession that the preparation of the root canal should ideally be carried out to the CDJ or the apical constriction.2 Therefore, accurate determination of the root canal length is a key factor in successful root canal therapy. Modalities employed for this purpose include tactile sensation, radiographic interpretation, and electronic methods.1

The performances of electronic apex locators have traditionally been afforded some latitude of acceptable error in locating the apex. Thus, radiographic positions within the ± 0.5 mm range to the apex are considered by some investigators as the narrowest acceptable range.14 Measurements attained within this tolerance are considered highly accurate. Some other studies rely on a more lax clinical range of ± 1.0 mm to the foramen. One reason cited for accepting a ± 1.0 mm margin of error is the wide range seen in the shape of the apical zone. Root canals do not always end with an apical constriction, a well-delineated minor or major apical diameter, or an apical foramen within the base of the cemental canal. Lacking such demarcations, an error tolerance of ± 1.0 mm is deemed clinically acceptable.15

In this study, when the strictest clinical tolerance was applied, the Ultima EZ device located the apical foramen within ± 0.5 mm in 50 root canals with a clinical accuracy rate of 91.6 percent and in 51 root canals with a clinical accuracy rate of 94.4 percent using stainless steel and Ni-Ti files respectively. The results of this study confirm those obtained by the authors' previous study9 and other investigators' studies for similar types of electronic apex locators regardless of the alloy used.5,14,15 In Steffen and colleagues, study measurements obtained with hand files and a Canal Leader handpiece attached to an electronic apex locator are compared. Although in this study the type of file alloy is not taken into account, the results obtained are consistent with the authors' result.17 It should be noted that moisture in the canal under the conditions of this study did not affect the results obtained with the Ultima EZ. But the variability observed could be exaggerated in less-controlled clinical conditions. This indicates that radiographic confirmation of master cone placement is still desirable, although the performance of the device is not influenced by the contents of the canals.

This study indicates that the agar/phosphate buffered saline model appears to be an effective model for evaluating the Ultima EZ apex locator and in familiarizing the operators with usage, although the apex locator is operated easily.

Since the Ultima EZ apex locator provides accurate information, it is possible to reduce a patient's radiation exposure. Additionally, electronic apex locators have advantages over radiographs in several specific applications. These applications include instances in which anatomical structures such as the zygomatic arch, the external oblique ridge, the maxillary sinuses, or adjacent roots impede clear visual interpretation of the apices. The device can also be useful for the pregnant, handicapped, sedated, or gagger patient, and for the patient with malformed or ankylosed jaws in whom it is impossible to obtain radiographs.

Conclusion

The accuracy of the Neosono-Ultima EZ apex locator in wet conditions exceeded 90 percent regardless of the alloy used. The results suggest that the Ultima EZ apex locator has a place in the endodontic armamentarium.

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Placebo Surgery

Robert E. Horseman, DDS

The scene: A dental patient presents with complaint of "twinges," periodic episodes of "discomfort" and a strong conviction that he has a "cavity." The dentist, after a careful examination consisting of murmuring h-m-m-m-m and wearing a frowny expression, determines that as far as he is concerned there is nothing visually or radiographically wrong with any of the teeth. However, he elects not to disappoint the patient or get into an argument, so he activates the PE (placebo effect) sequence as outlined in Krautzmeyer J, The dynamics of white lies. In, Psychiatr Odontol, chap 4. McGraw-Hill, New York, 1989, pp 144-67.

Medium shot: Doctor and assistant busy themselves with the necessary paraphernalia and armamentaria. The area is anesthetized, lights positioned and the volume of the tastefully annoying elevator music is adjusted to a level just slightly over that of the annoying handpiece whine of 120 decibels.

Closeup: Head of handpiece with bur in place is centered over target tooth and is activated at 350,000 rpm. Appropriate sounds emanate from it and from the assistant's vacuum hose as the camera zooms in tight to reveal the shank of the bur running against a cusp of the tooth. Cutting blades do not engage tooth structure.

Medium closeup: After suitable period of standard cavity prep busyness involving much vibration and four-handed activity, but no actual tooth reduction, the matrix is applied. Tooth is "restored" while a running commentary by doctor and assistant reading teleprompters just out of camera range convince the patient he is in better hands than All State.

Wide angle: Patient is dismissed with stern warning not to chew on that side for four hours and cautioned against shocking tooth with cold things for perhaps eight or nine years. A prescription for postoperative pain is given.

Closeup: Grateful patient offers endearing lopsided smile and congratulates dental team on a fine, painless job. Fade to black.

THE END

(not quite)

As far as we know, the above scenario has never happened, but a report published recently in the New England Journal of Medicine gives rise to speculation that medicine is on the verge of another one of its periodic discoveries. And whither goeth medicine, so goeth dentistry, goeth the old saying.

This particular breakthrough involves the introduction of fake surgery, ostensibly to prove that the placebo effect is alive and well and not nearly so messy. Briefly, the situation is this: Arthroscopic knee

surgery as performed on some 300,000 Americans each year simply doesn't work. Its popularity stems from the fact that it is minimally invasive and requires little or no recovery time.

How do we know that it doesn't work? "Sham surgery," that's how. Clever doctors, many of whom have knees of their own, ran through a rarely used, but extremely effective test. With straight faces that would serve to advantage in any high-stake poker game, they randomly assigned some patients to undergo regular arthroscopic surgery while others went through a scene as convincing as any episode of "ER."

This latter group was sedated and given superficial incisions to mimic the real thing. To the accompaniment of authentic operating room noises and doctor/nurse chitchat, the patients were patched up and sent home.

Two years later, 35 percent of the total of the two groups reported that they experienced less pain and were definitely more ambulatory. This was whether they had had the real surgery or not! It was the conclusion of the doctors that surgery worked no better and sometimes not even as well as the placebo, or sham surgery. Nelda Wray, chief of general medicine at Veterans Affairs Medical Center in Houston says, "This casts grave doubt on the procedure."

You can say that again, Nelda. One can assume that the faux surgery group, particularly those who experienced no relief whatsoever, might have some grave doubts of their own. "Wait a minute," they might say, "We have some grave doubts here. These incisions for example --fake?

"Yep."

"And the scars?"

"No, they're real."

"My knee still hurts."

"That's real, too."

"And the bill for $5,000?"

"Oh, that's real as well. Tell you what, for not actually going into the knee joint, we'll knock off $75."

"Thanks. I did enjoy the drama. I'll check in with you again when I think I need some brain surgery."

For those whiny patients who just won't let go of the knee pain thing, there's one other recourse -- total knee replacement. Doctors think the operation is up to 90 percent effective. Or maybe not. We shudder to imagine how this might be faked.

It is difficult to believe that such placebo shenanigans actually took place. Perhaps this is one instance where dentistry should not follow medicine. Think of what the National Enquirer could do with a "Sham Dentistry" story!