The Fattening of America: Setting the Stage for a Lifetime of Disease

7-Year Study Aims to Identify TMJD Biomarkers

Dental Botox Gains Popularity – and Adversaries

Plus...

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The Fattening of America: Setting the Stage for a Lifetime of Disease

by Anne Guignon, RDH, MPH

When this country formed, the United States economy was based on an agrarian society. As the industrial revolution blossomed, the labor force shifted to factory jobs. In the early years, the workforce was still populated by those who did extensive manual labor and did not rely on mass transit to get from work to home. As the country shifted from a rural, agrarian society to a more urban and suburban culture over the past half century, the number of calories the average American consumed every day began to rise. At the same time the caloric intake was increasing, the average American lifestyle became more sedentary. Automobiles became common-place, workplaces became more sedentary and electronic entertainment replaced outdoor recreation. America’s obsession with icons like McDonalds, supersizing and highly processed foods turned the tide towards obesity at an even faster rate.1-4

Obesity: A Complex Issue

Obesity is a complex, multifactorial modern day issue that is driving up health care costs, shortening lives and threatening the long-term wellbeing of an entire nation.4,7 Changes in society over the last four to five decades are contributing to the epidemic of obesity. These include fewer meals prepared at home, more single parent families or two paycheck family units employed outside of the home, proliferation of fast food restaurants and highly processed pre-packaged meals, limited physical education classes in schools, economic stress, increased soft drink consumption, sedentary workplace stations, increased dependency on automobiles and mass transit, reduction of unsupervised outdoor play for children and hours spent watching television or playing computer games. Additionally, smoking, stress, alcohol consumption, hormones, lack of sleep, environmental factors and genetic predisposition have been shown to increase the risk for developing excess adipose tissue.1-4,7,8

Weight Classifications and Screening

Body mass index (BMI) is a measurement calculated by dividing an individual’s overall weight by height. A BMI between 18 and 25 indicates an ideal weight. Those considered to be overweight, but not obese, have a BMI between 25 and 29.9, which indicates a higher fat measurement than their lean body mass. An adult whose body fat measurement exceeds their lean body mass by 30% is considered obese. Close to 5% of obese people are classified as severely obese with a BMI in the 99th percentile.1-4
While BMI has been the accepted standard of measurement, it is based on body types from populations of European descent. BMI is a screening tool that does not take into account individual discrepancies, such as those found in muscular athletes, whose lean muscle weighs more than adipose tissue or populations with either large or small body frames, such as Polynesians or Asians.

BMI calculations represent total overall body fat (adipose tissue) to lean body mass but does not further differentiate between regional fat deposits, which includes subcutaneous fat, intramuscular fat and visceral or abdominal fat that is found in the torso around the internal organs. Other potentially more accurate methods of estimating body fat and regional body fat distribution include measuring skin fold thickness or waist circumference. Obesity occurs when the waist circumference (WC) is more than half of the height measurement.

The Range of the Problem
The growing problem of obesity is worldwide and the United States is the leader in the Americas. No matter what classification, the increasing prevalence of both overweight and obese individuals is found throughout all groups in the country.

On a global level, more women are obese than men, however, more men are classified as overweight than women. Center for Disease Control statistics for the US population indicate that females, African Americans or those in a low socioeconomic status are more likely to be obese than males and those in other racial groups or who are in higher socioeconomic groups.

The prevalence of obesity doubled between 1980 and 2004 in the United States. Colorado remains the only state where less than 20% of its population is being classified as obese. According to the most recent CDC report, Colorado’s obesity rate climbed to 19.1% in 2009 and is expected to pass the 20% mark in the near future, joining the other 49 states and US territories in the race to become fat.

Mississippi is the fattest state in the nation with 31.6% of the population classified as obese. West Virginia and Alabama are also over the thirty percent mark followed by Louisiana, Arkansas, South Carolina, Tennessee, Kentucky and Oklahoma. Nine other states fall...
between 26% and 28%. As a nation, over 65% of all adults are now classified as either obese or overweight.\textsuperscript{1,21}

Children and adolescents are not immune to this epidemic. According to the CDC 2005-2006 data, 12.4% of children between ages 2 and 5 are classified as overweight. One third of all children from 6 to 11 years of age are overweight, with 17% being classified as obese. Thirty-four percent of adolescents age 12 to 19 are overweight and nearly 18% are obese. The number of overweight children mirrors the overall trend in the adult population.\textsuperscript{4,22}

Despite the fact that today's young adults between 18 to 29 years of age have a lower rate of obesity (24%) than adults over the age of 30 (35%), the proportion of obese young adults more than tripled from 1971 to 2006, while the rate of obesity doubled for all other adult groups during the same time period.\textsuperscript{4}

There are also racial and regional differences in obesity trends among adults in the United States. Analysis of 2006-2008 data reveals that 35.7% of all African Americans were obese, followed by 28.7% of Hispanics and 23.7% of Caucasians. Women had higher rates of obesity in each racial group with 39.2% of all African American women being obese. African American and Caucasian populations living in the South and Midwest census regions had higher rates of obesity than corresponding groups living in the West or Northeast. While still high, the rate of obesity for Hispanics living in the Northeast was lower than the other three regions.\textsuperscript{23}

**A Lifetime of Poor Health**

Obesity sets the stage for a plethora of chronic degenerative diseases that are shortening life spans and costing huge shifts in health care expenditures, with minimal positive outcomes.\textsuperscript{4} Those who are obese have an increased risk for developing diabetes, cardiovascular disease, stroke, hypertension, coronary heart disease, obstructive sleep apnea, certain cancers, kidney disease, gall bladder problems, dementia, and depression and have higher rates of premature death.\textsuperscript{1,3,7,12,16,19,20,24-30}

The risk for developing hypertension and Type 2 diabetes rises sharply with increased body weight. Approximately 85% of those with diabetes are classified as Type 2 and 90% are either overweight or obese. The non-fatal, but debilitating conditions associated with obesity include osteoarthritis,
respiratory difficulties, chronic musculoskeletal problems, skin problems and infertility.\textsuperscript{1,3,4}

The medical community defines Metabolic Syndrome or Syndrome X as a cluster of risk factors that significantly increase the risk for developing cardiovascular disease or diabetes. Metabolic Syndrome risk factors include excessive waist circumference, hypertension, elevated triglycerides, low level of high-density lipoprotein and high fasting glucose. Persons who exhibit three or more risk factors are classified as having Metabolic Syndrome.\textsuperscript{1,2,7,12-14,17,31,34} Current research indicates that those with metabolic syndrome have an increased risk for developing cognitive impairment.\textsuperscript{6,35,36} While not considered a risk factor for Metabolic Syndrome, a number of studies have shown high levels of serum C-reactive protein (CRP), an inflammatory marker, among those that are obese. Chronic, subclinical inflammation may contribute to the increased risk for cardiovascular disease in obese persons.\textsuperscript{38-40}

The health implications of being overweight and not obese, however, are mixed and complex. Research has found that individuals, who are overweight but not obese, have similar death rates as persons of normal weight. The longer a person is obese the greater the chance of developing obesity related diseases. The rising trend among children and young adults to be overweight or obese is a signal that degenerative disease will be on the increase.

Children and adolescents are developing obesity-related diseases, such as Type 2 diabetes, that were once seen only in adults. Type 2 now affects obese children even before puberty. Obese children are more likely to have risk factors for cardiovascular disease, including high cholesterol levels, high blood pressure, and abnormal glucose tolerance.\textsuperscript{1,2,4} One study of 5 to 17 year-olds found that 70% of obese children had at least one risk factor for cardiovascular disease and 39% of obese children had at least two risk factors.\textsuperscript{4} Smoking and drinking, even at low levels, has been linked to increased visceral adipose tissue among adolescent females.\textsuperscript{41} Research has shown that obese teens experience a higher rate of interproximal caries, perhaps a direct result of frequent snacking behaviors and frequent intake of highly acidic beverages.\textsuperscript{42}

Research indicates that today’s children are not expected to live as long as their parents and grandparents. Thirty-

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five percent of children born in America today have a lifetime risk of developing diabetes. The number increases to 50% for black and Hispanic children.\textsuperscript{1,4}

**Special Focus: Pregnant Women, Infants & College Students**

Maternal BMI is a predictor of a newborn’s weight status. It is reported that half of all women gain excessive weight during pregnancy.\textsuperscript{4,43} Infants of diabetic or obese mothers, who are large at birth based on gestational age, have a significant risk for developing metabolic syndrome during childhood.\textsuperscript{4,44-46} Close to half of all children born to mothers who are obese or who have excessive weight gain are overweight.\textsuperscript{43} Studies have found that maternal smoking and obesity were strong predictors of later obesity in young adult males.

Infants with rapid weight gain in the first year of life have a five fold greater risk of obesity in young adulthood and a 30% risk of adult obesity.\textsuperscript{49} A Japanese study reported pre-pregnancy smoking and drinking, dieting during pregnancy and infant daycare attendance as factors that lead to rapid infant weight gain. Rapid childhood weight gain can also promote insulin resistance and higher blood pressure.\textsuperscript{50,51}

Numerous studies indicate that college students are at particular risk for rapid weight gain, dubbed by some as the “freshman 15”.\textsuperscript{4,52-54} It is estimated that 20% of all college students are obese. While both males and females are challenged by high stress, less exercise, more study time, excess alcohol, snacking, an abundance of food choices through out the day and limited to no parental controls, young men gained on average more weight than women students.\textsuperscript{4,53-56} Time management, self-regulation and increased exercise are key tools for preventing weight gain at this transitional point in life.\textsuperscript{4,57}

**High-Calorie, Nutrient-Poor Dietary Intakes**

Diet, physical inactivity, genetic factors, environment, and health conditions all contribute to people becoming overweight and obese.\textsuperscript{1,4} Being overweight or obese is considered a nutritional deficiency, a term that may seem peculiar at first glance, however is an accurate way to describe excess caloric intake as compared to a person’s energy output.\textsuperscript{4,13} Nutrient intake has moved from being plant-based to high-fat, energy-dense animal-based foods.\textsuperscript{4} Today’s average American diet contains excess amounts of highly
processed foods that are nutrient poor but loaded with calories from refined sugars, sodium and fat.\textsuperscript{1,4}

The average child today eats out three times more per week than 30 years ago. Meals offered by most fast food restaurants contain on average twice the calories as a home cooked meal, but are nutrient poor and contain high levels of sugar, fat and salt.\textsuperscript{1,3,4} A typical child's meal at a quick service restaurant contains twice the calories young children need and less than half of the restaurants offer more nutritious alternatives like fat free milk or fresh fruits or vegetables. Research shows that one fifth of adolescents' daily energy comes from snacking, resulting in excessive caloric intake.\textsuperscript{3}

\textbf{Adding Empty Calories Every Day}

Adult eating patterns have changed as well. By 2002 adults were consuming on average 300 more calories per day than in 1985 and over 40\% of all food dollars were spent eating out in 2004. Portions served in fast food restaurants are 2 to 5 times larger than two decades ago. Women had a 22\% increase in overall caloric intake as compared to 7\% for men. Adolescent females ages 16 to 19 increased their caloric intake by 15\%.\textsuperscript{1,4}

The increase in soft drink consumption has had a tremendous impact. A 12 oz sugared soda averages 150 calories but today's beverages often contain 20 to 36 oz, totaling two or more servings. Teenage boys on the average drink three 12 oz soft drinks a day; girls average two 12 oz soft drinks a day. In addition, research has shown that the brain does not recognize liquid calories in the same way as more nutrient dense foods, often causing people to overeat or to crave sweet foods.\textsuperscript{1,4,5,8}

Every pound gained represents a caloric intake of 3,600 in excess of one's personal requirement. Based on the current trends in eating, a person could gain one pound every 12 days just by drinking two sugared 12 oz cans of soda pop per day. Without a corresponding increase in energy demand through exercise, this caloric consumption can result in a significant weight gain over time.\textsuperscript{5,9}

\textbf{Successful Marketing Plans that Keep America Fat}

Not only are Americans more sedentary than ever but marketing media focused on sales and market penetration is fueling the race to put on pounds.
A 2008 Federal Trade Commission Report to Congress outlined the details noting that over 50% of all 2006 TV ads are marketed towards children. Nearly $500 million dollars a year is spent advertising soft drinks to young children and adolescents. Close to $300 million is spent on restaurant ads and $240 million on presweetened breakfast cereals. More healthy alternatives receive scant marketing dollars. About $12 million is spent on marketing fruits and vegetables and $52 million on dairy products. A 2009 Yale University study reports that the average preschooler sees 642 cereal ads on television every year and the children's cereals with the poorest nutrition have the largest advertising budgets. In the end we are building a society of sipping, munching, crunching, couch-potato kids.

Marketing specialists have taken full advantage of today's economic squeeze by supersizing portions and providing so-called economic incentives to schools that allow on campus vending machines that dispense non-nutritious products or allow passive product advertising in exchange for financial contributions to fund school projects.

Conclusion

The epidemic of obesity has negative effects on oral health; frequently resulting in dental caries, tooth erosion, hypersensitivity and the development of degenerative conditions like diabetes and cardiovascular disease, which directly impact on a patient's periodontal health. More than any time in history, dental professionals now have an opportunity to positively affect the overall health of those who seek oral care. It is our responsibility to understand myriad factors that have an impact on oral health and take a leadership role that will guide our patients forward towards better oral and systemic health. ~ITK

Anne Guignon, RDH, MPH is an internationally recognized speaker and author, and is the Senior Consulting Editor for RDH Magazine where she writes a monthly column. Anne is an active ADHA member, has practiced continuously in Houston since 1971, received the Sonicare-RDH Mentor of the Year Award in 2004, and was the 2009 recipient of the Colgate-ADHA Irene Newman Award. She can be reached at anne@anneguignon.com.
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Temporomandibular joint disorder (TMJD) patients are more sensitive to pain compared to healthy people, according to preliminary results from a seven-year study presented at the American Pain Society (APS) annual meeting held May 6-8.

The $19 million study, involving 3,400 people, aims to identify and define the causes and effects of TMJD, ultimately leading to new treatments and cures.

The Orofacial Pain: Prospective Evaluation and Risk Assessment study is funded by the National Institute of Dental and Craniofacial Research, part of the National Institutes of Health. It is being conducted by the dental schools of University of Maryland, University of North Carolina at Chapel Hill, University of Florida, and the University of Buffalo.

The researchers initially brought in more than 3,000 healthy people and have been tracking them for five years to identify those who develop symptoms of TMJD. During the initial visit, the researchers evaluated various physiological and psychological factors to record the subjects' condition before they developed TMJD. Measures included sensitivity to pain, psychological elements, and aspects of lifestyle. Equipped with this information, the researchers called back patients who developed TMJD to study what may have triggered the condition.

At the APS meeting, team leaders discussed features that characterize TMJD patients, which they believe will ultimately lead to identifying the predictive biomarkers of TMJD.

"We have discovered so far that TMJD patients are more sensitive to pain in general, or pain in other parts of the body, compared to healthy people," Joel Greenspan, Ph.D., professor and chair of the neural and pain sciences department at the University of Maryland Dental School, told DrBicuspid.com. "This leads us to believe that some change takes place in the way the central nervous system processes pain within TMJD patients so that pain is exaggerated."

They also found correlation on a variety of other measures, such as heat and mechanical pain sensitivity, he added. "It is very clear that people with TMJD have a greater likelihood of suffering from other chronic pain conditions than people without TMJD."

**Psychological Factors**

Some evidence has surfaced that psychosocial factors contribute to persistence of TMJD, said Roger Fillingim, Ph.D., a professor of community dentistry and behavioral science at the University of Florida College of Dentistry.

The team evaluated a large number of healthy volunteers to determine features of their sensitivity to pain and psychological factors related to TMJD, such as depression and anxiety. By identifying those who develop the condition, the researchers can determine whether the patients had these features of TMJD before the manifestation of the condition or experienced a physiological change after developing TMJD.

"If the initially healthy participants did have these characteristics of TMJD [greater pain sensitivity, greater psychological stress] before, then it is possible that these could be predictive factors," Greenspan said. "However, we are a year or two away from identifying any definitive factors."
Genetics could potentially play a role in the development of TMJD as well, the researchers noted.

"There are two or three genetic variations that are more prevalent in cases than controls. But these findings are preliminary because we are only looking at a fraction of our sample so far," Greenspan said.

**Data Sample Size**
Although this study confirms a lot of existing data about TMJD, it's unique in terms of its sample size. With more than 3,000 participants, it is the largest study of its kind ever conducted.

"The fact that we are getting so much information on the patients' demographics, behavior habits, physiology, psychological measures, and genetic variation gives us the opportunity to look at how all these factors relate to the condition of TMJD," said Dr. Greenspan.

The team is collecting data on all possible causes, such as grinding teeth, stress, trauma, and psychological factors. They are then ranking the factors and analyzing multiple combinations of those factors.

"Although there have been many smaller studies of individual or a few factors, this is unique because we are looking at all of these variables," said Greenspan. "The volume of data we have is almost mind-boggling."

They are also looking at subtypes among the patients, he added. "There are variations among the TMJD patient population depending on longevity and severity of their symptoms. There has been no study where the sample size was big enough to look at these subtypes at the same level of analysis that we will be able to."

The researchers are currently working on papers that will be written and submitted before the end of the year. They anticipate that in two years they will be able to report on predictive factors.

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Dental Botox Gains Popularity – and Adversaries
by Rochelle Sharpe

Dentists aren’t just wielding needles filled with Novocain these days. Many are now injecting their patients with Botox to improve appearances and alleviate pain -- while at the same time inciting the ire of dermatologists, plastic surgeons, and some of their colleagues.

As state dental boards around the U.S. struggle with how to regulate such injections, some dentists are forging ahead -- and establishing a lucrative new sideline in the process.

“We are creating a new category in dentistry,” said Louis Malcmacher, D.D.S., president of the American Academy of Facial Esthetics, who teaches dentists how to use Botox.

Nearly 10% of dentists now use Botox, Dr. Malcmacher said, and demand to learn how to administer it is exploding. Dr. Malcmacher expects to teach about 60 two-day seminars on Botox this year, three times as many as last year.

And no wonder. With the recession damaging many dentists’ bottom line, it’s hard to resist the prospect of earning tens of thousands of dollars each year with a relatively simple addition to the services they offer.

“It’s a real no-brainer,” said Catherine Maley, an aesthetic industry marketing expert who began selling Botox marketing kits for dentists six months ago. “There’s a 50% markup, and it takes a couple of minutes to do.”

She estimates that the average dentist can earn $148,780 a year doing Botox injections, assuming that 20% of their current dental patients will want to get injections two to three times a year. The cost to remove wrinkles between the eyebrows can range from $300 to $400, and getting rid of vertical pucker lines around the mouth can cost $100 to $200 more. In addition, since Botox effects can fade after a few months, many patients return repeatedly for refresher injections.

Dentists are well-positioned to take advantage of the Botox boom because they see patients several times a year, Maley said. With Botox patients needing regular touch-ups, it’s convenient for them to have the treatments added to their routine dental cleanings, she added.

Yet Maley advises dentists not to advertise the services in order to reduce the chances that other professional groups will challenge their ability to do such work. Some dentists simply hang up signs in their offices offering the injections -- and watch demand soar, she said.

A Turf War?
As Botox demand continues to surge, turf wars over who should be able to administer the medication show no signs of abating. Plastic surgeons and dermatologists are adamant that dentists should not be giving injections in the face.

“I’d be very reluctant to let someone stick a needle in my forehead with no training in that area,” said Renato Saltz,
M.D., president of the American Society for Aesthetic Plastic Surgery (ASAPS). "Everybody feels qualified to handle this. But it boils down to people's ability to handle complications."

But many dentists are equally adamant that Botox offers numerous clinical advantages outside of cosmetics (see sidebar). And some argue that they are more qualified to give Botox injections than even dermatologists and plastic surgeons.

"Dentists give more injections than any other healthcare professional," Dr. Malcmacher said.

In addition, almost all of the dental protocols for Botox were co-developed by a dentist. Howard Katz, D.D.S., a San Diego dentist, said he designed most of the protocols while he was co-developing a drug to reverse the effects of numbing agents (OraVerse, Novalar Pharmaceuticals). He initially went to Allergan, which manufactures Botox, looking for studies that might be relevant to his work. At that time, Botox was cleared by the FDA for only a small number of therapeutic purposes, including treating such conditions as crossed eyes and uncontrollable blinking.

Allergan didn't have any studies to help Dr. Katz, so he developed protocols for Botox and patented them. Dr. Katz eventually developed 19 uses for Botox in dentistry, and his Botox protocols are taught to dentists and physicians around the world. He is also the course director for Dentox, which offers monthly courses on Botox use that include protocols for facial aesthetics and dental therapeutics because "almost every dental indication will affect aesthetics," he said.

Qualifications Questioned

The majority of Botox injections performed by dentists are in Europe and the U.K., he said. But for dentists in the U.S., he said, "it's taken 10 years to catch on." Part of the problem for U.S. dentists is that they are often challenged about their qualifications, even by some of their peers.

In Maryland, an oral surgeon complained to the state dental board about a dentist doing Botox injections, said Gigi Meinecke, D.M.D., who has a private practice in Potomac, MD. That complaint led to a protracted discussion in the state about when and whether dentists should be allowed to do Botox treatments.
At first, the state dental board said dentists could not do such cosmetic treatments, Dr. Meinecke said, with a board member telling her he believed dentists should "only be drilling teeth." But later, the state attorney general said that state law neither allowed nor barred dentists from doing injections. Now, the state dental board has launched a committee to determine whether to support a change in the law.

Dr. Saltz said the ASAPS has been talking to state regulators in Utah, Oregon, California, New Jersey, and other states to educate them about the potential problems with dentists and other professionals performing Botox injections.

In 2009, 18 state dental boards had specific policies on cosmetic usage of Botox, according to the Academy of General Dentistry. All states allow dentists to inject Botox for therapeutic reasons.

But separating therapeutic from cosmetic applications of Botox amounts to making a distinction without a difference, according to Dr. Katz. When you inject it, "it doesn't stay where you put it," he said. So, for example, if patients get injections around their temples and forehead to reduce teeth clenching, they will get an added cosmetic benefit: their smile lines will disappear, too.

Cosmetic dentists, meanwhile, say they have used Botox to replace complicated procedures aimed at eliminating gummy smiles. Rather than offering patients just "horrible surgical options" that involve crown lengthening and veneers, Dr. Meinecke said she can simply inject Botox into one of the five muscles that raises the upper lip.

In fact, cosmetic dentists say they need to go beyond teeth and gum work to improve their patients' appearances. Patients who walk out of the office with beautiful veneers and thin, wrinkled lips simply won't look good, said Dr. Malcmacher, who injects Botox in almost all of his patients who get veneers.

"We've become very tooth-centric in dentistry," he said. "It takes a lot more than teeth to make a great-looking smile." ~ITK

Clinical Applications
In addition to its cosmetic uses, Botox is used to alleviate a variety of dental problems.

Orthodontists may use it to retrain muscles not to work so hard, preventing teeth from shifting back after braces are removed, said Louis Malcmacher, D.D.S., president of the American Academy of Facial Esthetics. Similarly, prosthodontists may inject it to help patients relax their muscles and not spit out new dentures.

Dentists have also used Botox to help patients suffering from bruxism, temporomandibular disorders, and migraine headaches. Many people turn to the medication when they can't get relief from mouthguards, said Howard Katz, D.D.S., describing people who come to his office carrying supermarket bags filled with night guards that didn't work.

"It doesn't make sense that generic splints are still considered the standard of care for bruxism," he said.

Even periodontists can benefit from using Botox, said Dr. Katz, pointing out that one leading cause of losing gum tissue involves muscles pulling too hard on frenums that join lips to gums.

"In just about every aspect of dentistry, there's a necessity to control force without being aggressive," he said.

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In 2008, The Indiana Dental Assistants Association, along with the Indiana Dental Association and the Indiana Dental Hygiene Association, was successful in having legislation passed that recognized dental assistants in the Indiana Dental Law and will allow assistants to perform coronal polishing and apply caries preventive agents with education and training.

Indiana Governor Mitch Daniels signed the bill in April 2008. This bill became law on July 1, 2009; however, dental assistants cannot perform these new duties without education and training approved by the Indiana State Board of Dentistry. The Indiana State Board of Dentistry is currently writing rules and educational requirements. The proposed rule has been drafted by the ISBD and public hearing will be held. Once the rules are adopted, then the educational programs will be available.

The Indiana Dental Assistants Association has been monitoring the progress on the proposed rule over the past year. On August 7, 2009, the Indiana State Board of Dentistry heard testimony from the Indiana Dental Assistants Association along with the Indiana Dental Association and the Indiana Dental Hygienists Association on the language of the draft rule for the new delegation of duties for dental assistants and dental hygienists. The Indiana State Board of Dentistry is still processing the rule. Until the rule is final and dental assistants have the required training and education to perform these duties, dental assistants cannot perform coronal polish or apply fluoride in Indiana.

This article reprinted with permission of The Dental Assistant. November/December 2009 Issue.

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**Dental Sealant Placement Protocol**

- Proper diagnosis and treatment plan with radiographs
- Patient education: why, what, where and how of sealant placement. Why a sealant rather than a “tooth cutting” restoration; what a dental sealant is; where it will be placed; and how long it may last.
- Clean the tooth: use of either flour of pumice, hydrogen peroxide or air slurry polish
- Isolate tooth from salivary contact using either a rubber dam, cotton rolls or Isolite
- Acid etch the occlusal surface for the appropriate amount of time: preferably place gel then use the tip of the explorer to gently open the pits
- Wash with copious amounts of water utilizing high speed evacuation
- Change cotton rolls to continue the dry field
- Evaluate the occlusal surface with air: air dry with water-/oil-free air supply to assess the white chalky appearance of the occlusal table. If the tooth does not appear chalky white, reapply the acid etch.
- Place the sealant into the fissures of the tooth, avoiding air inclusion
- Polymerize as per manufacturer’s recommendation
- Evaluate sealant polymerization on sealant periphery prior to central fissure area.
- Evaluate patient’s occlusion, adjust as necessary (higher filled dental sealants will not wear as easily and may cause occlusal trauma and future discomfort)
- Floss contacts
- Post operative education of patient and parents/guardians.

Part of an article from “A Better Kind of Sealant” by Sheri B. Doniger, DDS, in The Dental Assistant, Jan/Feb 2010 issue
Oral Health America’s Medical Dental Dialogues provides a platform for medical and dental health professionals to share knowledge and treatment protocols for systemic diseases related to diseases of the mouth.

“In our practices, we know that the oral systemic link is important, and yet we have limited ability to communicate with patients about it,” said Tony Stefanou, DMD, Associate Director of External Relations, Oral Health America. “Compounding that challenge is that there is minimal collaboration between medical and dental professionals. We are particularly excited about bringing our health care communities together to work towards a future where patient care is co-managed by care providers in clinical and office settings.”

Medical Dental Dialogues is co-sponsored with the New York Academy of Sciences (NYAS) and leading academic medical and dental institutions. The program targets health care professionals in private practice, academia, research and public policy by focusing on critical issues requiring a multi-disciplinary approach. This year’s focus will be Diabetes.

“We believe that the integration of medical and dental care will improve patient outcomes and the quality of health care delivery services,” said Mary Lee Conicella, DMD, Chief Dental Officer at Aetna, which has provided support for the program since its inception. “Getting physicians to the table with dentists to discuss the prevention, diagnosis, and treatment of oral and systemic disease is a first step towards disease co-management.”

To reach to the broadest audience possible Medical Dental Dialogues begins with a live Symposium and is distributed through multiple media to professionals and the public. Thanks to a grant from DentaQuest Foundation, eBriefings from OHA's 2009 Medical Dental Dialogue, Collaborative Health Care for Older Adults, are now online at the New York Academy of Sciences web site. To access the multimedia presentations of speakers’ slides and audio, visit http://www.nyas.org/collaborative.

Medical Dental Dialogues was formerly commissioned by the National Periodontal Disease Coalition, co-sponsored by NYAS and Columbia University. ~ITK

This article reprinted with permission of Oral Health America. Spring 2010 Issue.
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