Women’s Oral Health Issues
Presented by Dr. Barbara Steinberg, DDS

Abstract
Women have special needs and considerations that men don’t have when it comes to oral health and dental care. Hormonal fluctuations affect more than a women’s reproductive system. They have surprisingly strong influence on the oral cavity. These changes are not necessarily the result of direct hormonal action on the tissues, but perhaps best explained as the effects of local factors on tissues exacerbated by hormonal activity. Puberty, menopause, pregnancy, and menopause all influence women’s oral health and the way in which dental treatment should be approached. Similar influences may be seen as well in women taking oral contraceptives and menopause hormone therapy. Discussion will lend itself to these life cycle changes and their impact on the oral cavity. Also presented are oral conditions that may occur in women who are affected by osteoporosis, eating disorders, as well as those who are victims of domestic violence.

Educational Objectives
After participating in this course, the professional will be able to:
1. Identify and list common oral manifestations and special dental-medical considerations when treating the female patient across the life cycle.
2. Apply the latest information regarding osteoporosis and its impact on the oral cavity as well as antiresorptive agent-induced osteonecrosis of the jaw in patient care.
3. Review oral conditions which may be indications of domestic violence in the dental patient.
4. Identify potential effects of eating disorders on the oral cavity.

Author Profile
Dr. Barbara Steinberg, DDS received her D.D.S. from the University of Maryland School of Dentistry and completed a residency at the Medical College of Pennsylvania. She is Clinical Professor of Surgery at Drexel University College of Medicine, as well as Adjunct Associate Professor of Oral Medicine at the University of Pennsylvania School of Dental Medicine. She is a Diplomate of the American Board of Oral Medicine.

Dr. Steinberg specializes in the treatment of medically compromised patients. She is a nationally and internationally invited lecturer in the area of dental treatment of the medically compromised patient and women’s health, and has authored numerous articles and contributed to major textbooks on these subjects. For the last nine years Dr. Steinberg has been named by Dentistry Today “One of the Top Clinicians in Continuing Education”. Dr. Steinberg is a former spokesperson for the American Dental Association on Women’s Oral Health Issues and has had numerous television appearances, including Good Morning America. She represented the American Dental Association at a congressional briefing on Women’s Oral Health Issues and presently serves on the Health, Nutrition and Fitness Board of Women’s Day Magazine. Barbara Steinberg may be reached at bjsdds@aol.com

Author Disclosure
Dr. Steinberg discloses that she is a key opinion leader for Phillips Oral Healthcare the commercial supporter for this educational activity.

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Supplement to PennWell Publications

Publication date: Oct. 2012
Expiration date: Sept. 2015

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This course has been made possible through an unrestricted educational grant by Phillips Oral Healthcare.
This course was written for dentists, dental hygienists and assistants, from novice to skilled.

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Women have special needs and considerations that men don’t have when it comes to oral health and dental care. Hormonal fluctuations affect more than a women’s reproductive system. They have surprisingly strong influence on the oral cavity. These changes are not necessarily the result of direct hormonal action on the tissues, but perhaps best explained as the effects of local factors on tissues exacerbated by hormonal activity. Puberty, menses, pregnancy, and menopause all influence women’s oral health and the way in which dental treatment should be approached. Similar influences may be seen as well in women taking oral contraceptives and menopause hormone therapy. Discussion will lend itself to these life cycle changes and their impact on the oral cavity. Also presented are oral conditions that may occur in women who are affected by osteoporosis, eating disorders, as well as those who are victims of domestic violence.

Effective Date: October 1, 2012
Expiration Date: September 30, 2015
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Welcome! And on behalf of myself, PennWell, and Philips, I want to thank all of you for joining me for this presentation, entitled “Women’s Oral Health Issues.” PennWell is offering the CE course with educational financial support provided by Philips Oral Healthcare. I’m Barbara J. Steinberg, DDS. I’m a Clinical Professor of Surgery at Drexel University College of Medicine in Philadelphia, as well as an adjunct Associate Professor of Oral Medicine at the University of Pennsylvania School Of Dental Medicine in Philadelphia. I’d like to thank PennWell for offering me this opportunity to speak with you about this very important topic.

I’d like to go over the educational objectives.

1) To recognize oral manifestations and special dental-medical considerations when treating the female patient during fluctuations in sex hormones occurring in puberty, menses, pregnancy, menopause, and the use of oral contraceptives.

2) To incorporate the latest information regarding osteoporosis and its impact on the oral cavity as well as antiresorptive agent-induced osteonecrosis of the jaw.

3) To recognize oral conditions prevalent in victims of domestic violence.

4) To recognize the effects of eating disorders on the oral cavity.

So first, we’ll look at puberty when young girls are maturing into young women.
We know that estrogen and progesterone effect females throughout their life cycles, beginning at puberty and continuing up to and even after menopause. There’s receptors for both estrogen and progesterone that have been demonstrated in the human gingiva. And it seems that the increase in circulating sex hormones during puberty has a modulatory effect in sub-gingival flora, favoring gram-negative anaerobic organisms associated with gingival inflammation. So, when these young girls begin menstruating, it’s rare, but they can have evidence of gingival inflammation. We may see nodular hypoplastic reaction of the gingiva to local irritants. So it’s not just the hormonal effects, it’s really a cofactor. There’s local ideology and it’s exacerbated by these hormonal influences. The inflamed tissues may be deep red; they may be lobulated with ballooning distortion of the interdental papillae. And, this was a little girl that we saw at the hospital and any of these patients I saw with my mentor and my chief, Dr. Louis Rose, who is a periodontist and physician, and this little girl presented with a mouth looking like this. And because she is a minor, we took the medical history from the mother and everything appeared to be unremarkable in her medical history, both present and past. And she - main problem - she had a mouth that looked like this for about the last month. It was so bad she could hardly eat, she could hardly sleep, and I have to tell you that if someone comes in looking like this, we start thinking it’s some very ominous things that could be wrong such as leukemic infiltrates; hyperplasia secondary to pharmacotherapeutic agents, but we ruled that one out because she was not on any medication; could be an uncontrolled diabetic; could be Kaposi’s sarcoma associated with HIV. So the differential goes on and on. It could also be pregnancy gingivitis. But, I have to tell you that, you know, after a complete medical work up, which is the very first thing, and that we did, we had her see her pediatrician. And by the way, before we sent her for a medical workup, we asked mom to leave the room when we were examining her because we wanted to ask her some very personal questions and we really did not want mom in the room. We asked her whether she had ever had sexual relations and if so, type? We also asked if she ever injected any drugs. She could have said positive, but she said no. She was not sexually active and nor did she use any types of drugs. She’s 11 years old but we certainly could not rule those two things out.

This is what she looked like very close up and I think that this is probably the very worst case of puberty gingivitis I’ve ever seen. And certainly, puberty gingivitis is not top on my differential. So, as I mentioned, after we took this thorough history and did an examination we did refer her to a pediatrician and the good news, she did not have any of those medical entities. She was not HIV positive, she was not pregnant, she did not have diabetes, she did not have leukemia. So, all of these systemic issues were ruled out. So, that left us, including me working with my favorite dental hygienist, Sue Georgiou* at the time; Sue embarked on a really rigorous schedule of scaling root planing and curettage. They became best of friends because this little girl came in all the time, at least once a week, for this treatment.
And this is what she looked like 11 months later, without any surgical intervention. So this is just from the fine work of a wonderful hygienist, coupled with a little girl that was very motivated to take care of her mouth so her homecare regimen became fastidious. I know it’s not perfect but look at this difference. So how did we realize that it was probably due to poor oral hygiene, local ideology, but also exacerbated by these hormonal influences. Well, we talked to the whole team that worked her up medically and there was an adolescent gynecologist and said that she had begun menstruating early and she was having some issues with her menses and they were working with her and we were working with her and her menses became more regular and she became a great dental patient and this was the result.

So, yes, this was due to the local factors coupled with the hormonal influences at this time. I’m often asked, did we give her systemic antibiotics and the answer is no. We did not. We gave her an antimicrobial rinse, we taught her great practices in taking care of her mouth, and this was the result. So, I wasn’t going to show you just mild inflammation, I wanted to show you one of the worst cases, probably the worst case I’ve ever seen in my 35-36 years of my career.

So that brings us to menses.

The next time we see these influences of hormones and the impact on the oral cavity may occur during the monthly menses. For some women, it is not uncommon that 3-4 days before they begin menstruating, they notice that their gums get tender, tend to bleed easily, they may wake up with blood on their pillow and then they see this start to resolve before their menstrual period is over. We generally see this most common in the lower anterior region as depicted here on the labial surfaces. Certainly for those women that have this issue associated with their menstrual cycle, we may have them come in more often for their hygiene visits, we may want to put them on an antimicrobial rinse and any other method that you have in your practice that you find will help reduce the gingival inflammation.
For other women during their menses they may have activation of aphthous ulcers, you know these ulcers that occur on non-keratinized tissue, and they’re very painful. So we all have our favorite remedy for an aphthous ulcer. Other women may have an activation of a herpetic lesion on their lips, herpes labialis. And, you know, they have the prodrome where they have that tingling burning sensation and they just know when that lesion is going to crop up. So we will generally write her a prescription for one of the antiviral topical agents that they can use on a monthly basis. I put this in, prolonged hemorrhage following oral surgery, and I really want to emphasize that this is not really documented scientifically. Yet, you will still have patients coming in and saying, “You know, when I have my tooth extracted when I have my period, I tend to really, really bleed.” You know, it’s really not associated with the menses. There’s nothing that supported this in the scientific literature. Perhaps they have an underlying bleeding disorder. But I wanted to put this in because it has been said over the years, maybe there’s been some anecdotal reports of this, but this is nothing that is substantiated in the science literature and it really should not occur due to the hormonal influences of menses, perhaps for another reason, but not due to that. Swelling of the salivary glands also have been reported, really, really rare in the literature and I think most often I’ve seen it in the European literature and it’s been associated with the menstrual cycle. But it’s very rare and by the time you leave here today you will know the number one reason in young women that I think of having something wrong with swelling of the salivary gland and it would not be attributed to menses. It’s generally something else which we will talk about a little later.

So that brings me to pregnancy. If I had to pick one time during life of our female patient, and looking through all these life cycle hormonal changes, it would probably be during the pregnancy, when she may have an oral manifestation. The percentages of women that do have gingival inflammation during pregnancy has been so varied and reported in the literature anywhere maybe 30-70% of all pregnant women; I’ve seen some higher statistics. Suffice it to say that a high percentage of pregnant women will at some point during the course of their pregnancy, experience some degree of gingival inflammation. And generally the rule is that the worse your mouth is going into the pregnancy, the worse that it gets during that pregnancy. So our whole idea is to try to get people in an optimal state of oral health before they get pregnant or shortly after, if they just find out that they’re pregnant, have time to go for their dental visit. So, I think it’s very, very important to realize that, you know, great communication with your female patients and I always ask them when was their last menstrual period, LMP, and the reason for that is we want to know if there’s a chance that they’re pregnant. Yes, I mean they could be missing a period for other reasons, but in my mind, if they’ve missed a menstrual period they’re pregnant until proven otherwise.
So, as I mentioned, the most common oral manifestation associated with the pregnant state is gingivitis. We generally see these inflammatory changes come about in the second or third month of gestation and it’s maintained or increased in severity during the second trimester and then it generally decreases in the last month of pregnancy and eventually regresses after the baby is born. So we see here all degrees of gingival inflammation, and the slide on the lower right looks very similar to the little girl that I presented that had puberty gingivitis but this is pregnancy gingivitis. And certainly, we would go through the same differential with this young woman that we did for the young girl that was going through puberty.

I will address treatment of the pregnant patient after I show these oral manifestations because that is very key. This is the other oral manifestation that really does not occur very often. Statistics on that and the number of percentage points that occurs in pregnancy really, really vary. But suffice it to say, it’s not a common occurrence. We call this a pregnancy granuloma or epulis. I tend not to use the term pregnancy tumor, although that has still been reported in the literature. I don’t like that terminology because you tell a pregnant woman that she’s got a tumor in her mouth, she thinks she’s going to be dead before the baby’s born because she automatically thinks she has cancer. And certainly, she does not have cancer. This is a granuloma. It’s very similar to a pyogenic granuloma which is a cyst-like vascular lesion. It could either be sessile or pedunculated. It can be anywhere from a millimeter to a centimeter in diameter and generally it can vary in color, depending on the vascularity. So here we see two very different looking pregnancy granulomas and we tend not to want to excise them during pregnancy; not because it’s not safe to do but because they tend to reoccur during that same pregnancy. So, unless it’s really bleeding, they tend to interfere with mastication, or, I know this isn’t very scientific, but if it’s really not aesthetically pleasing; like we had a medical student one time come into us and she had one in the maxillary anterior region, right in between her centrals. So we didn’t want her to walk around for the rest of her pregnancy looking like that so we excised it with a local anesthetic. And, generally speaking, they tend to regress after the baby is born and the postpartum period and all you generally have to do is some minor gingival recontour.
Now, tooth mobility that’s been reported associated with pregnancy is a very, very rare entity. Generally speaking, when tooth mobility has been reported, it’s really been due to the preexisting periodontal disease, not really due to the hormonal influences attributed to pregnancy. But it has been occasionally reported in the literature. Xerostomia has been reported during these times when we see these hormonal fluctuations, so a pregnant woman may complain of a dry mouth and we’ll talk about that a little bit later, but I always tell them, the very first thing, to carry around a water bottle.

Now, probably the latest in the literature that is really new when it comes to treatment of the pregnant patient, is that information that is “Evidence-Based Guidelines for Health Professionals.” And I’m really happy to see we have new guidelines and treatment of the pregnant patient that’s really clinically evidence-based. And this is a publication, about 80 pages, put out by the California Dental Association Foundation in conjunction with the American College of Obstetricians and Gynecologists, District IX. It was published in February 2010, and you can go online to the California Dental Association Foundation and you can find this document online or you can call them and they will send you a hard copy. I really wanted a hard copy because I just love reading things that are like a book in my hand. It’s a really very well written publication for all healthcare professionals. I think it really puts to rest some of the controversial issues in treatment of the pregnant patient. Now, keep in mind, it’s 80 pages and I have an hour with you, so I really just took the salient points out of this to give to you today and I really recommend that you get this publication. There’s no charge for it and it really gives you a great idea of what pharmacological agents you can use and it will go over many different aspects of providing care to the pregnant patient. And it’s not just for the dental team, it’s for all healthcare professionals.
And, the consensus statement is such; and I took this right from the guidelines. It’s what’s in green. “Prevention, diagnosis and treatment of oral diseases, including needed dental radiographs and use of local anesthesia, are highly beneficial and can be undertaken during pregnancy with no additional fetal or maternal risk when compared to the risk of not providing care.” So that statement really says it all. And this is really the major consensus statement in the guidelines. And good oral health and control of oral disease protects a woman’s health and quality of life and has the potential to reduce the transmission of pathogenic bacteria from mothers to their children.

The most common complications of pregnancy include spontaneous abortions, which are miscarriages, preterm birth, preeclampsia and gestational diabetes. And the current scientific studies regarding these conditions related to dental care indicate the following: that the control of oral diseases in pregnant women has the potential to reduce the transmission of oral bacteria from mothers to their children.

There is no evidence relating early spontaneous abortion to first trimester oral health care or dental procedures. That’s key because all too often we wanted to put off procedures in that first trimester, thinking that “oh my, this dental procedure could possibly give way to having a spontaneous abortion, we don’t want to perform this.” Well, now it’s very clearly stated there is no evidence relating early spontaneous abortion miscarriages to first trimester oral health care or dental procedures.

Preeclampsia is a challenging condition in the management of the pregnant patient, but preeclampsia is not a contraindication to dental care. Preeclampsia, when the pregnant woman will have a sudden rise in blood pressure, sudden weight gain, they start swelling all over, they become edematous and then they become eclamptic, they start spilling protein in the urine; this will become a very dangerous situation for that mother and fetus when they become eclamptic and they have to generally be delivered right away. So, this is just something that they talk about with preeclampsia and dental management, it is not a contraindication to dental care.
While research is ongoing, the best available evidence to date shows that periodontal treatment has no effect on birth outcomes of preterm labor and low preterm birth weight and is safe for the mother and fetus. So, yes, we’ve heard a lot of conflicting data and studies over the years since 1997 regarding the relationship of periodontal treatment and preterm low birth weight of babies and while this research is ongoing, the best available evidence to date – it could change – but it shows that periodontal treatment has no effect on birth outcomes of preterm labor and low preterm birth weight. One of the most important things that we’ve learned from these studies is that it is safe for dental treatment for the mother and it’s also safe for the fetus. So that’s really very key out of those studies.

Best practice suggests that because it has been shown to be safe and effective in reducing periodontal disease and periodontal pathogens, periodontal care should be provided during pregnancy. And I put this in for this group because this is something that comes up all the time and I really recommend that you dissect this document and really read it, but I wanted to really go over this salient point. So that periodontal care should be provided during pregnancy.

The role of oral health professionals includes providing preventive services and restorative treatment along with anticipatory guidance for pregnant women and their children. Oral health professionals should render all needed dental services to pregnant women. Pregnancy is not a reason to defer routine dental care or treatment of oral health problems. And, I know this may sound redundant but this is such an important issue and that’s why it’s in green.
Now, a question I’m often asked in my lectures, should we call the health care provider that is taking care of this pregnant patient? It’s not always a physician; it may be another healthcare provider. And in this document it clearly states it is not necessary to have approval from the prenatal care provider for routine dental care of a healthy patient. And I think that’s the key – of a healthy patient. If that patient is having problems with the pregnancy or they have some underlying complicating medical issues and they’re pregnant; yes, you will want to consult with the healthcare practitioner. But for the normal, healthy pregnant patient, you do not have to call and get approval every time you want to treat. And I think that’s very important.

My, how we’ve gone through life. We’re up to menopause and menopause is defined as the cessation of menses for 12 consecutive months. The average age in this country is approximately 51 years of age. I have a woman that is starting to miss a period here and there and maybe every three months she’s getting it or she goes three months and gets it every month and then misses a month. She is in perimenopause, which are those years leading up to the big change, menopause.

So, women at this time have, you know, a good number of complaints; for some women. In addition to the hot flashes and the night sweats and vaginal dryness and mood swings, now remember, not every woman gets all of them. And you can’t pick and choose which ones you’re going to get, so it’s different for everyone and there’s no one magic pill or anything that’s magic for everyone to cure all this. And some women will have some oral discomfort during this time as well. Some women will complain of pain, generalized. We’re not really sure of that ideology. Some women complain of burning mouth. And what I really advise everybody is that when a patient – and by the way, this is for a man or woman – but when they come in complaining of a burning mouth you need to rule out everything within the scope of your practice of any local ideology. Once you’ve ruled out everything within our domain; oral cavity, head and neck region; if we cannot figure out what may be causing this I really want to refer this patient to a health care practitioner because I don’t want to miss an underlying medical problem that could be severe such as a diabetic, someone that has nerve damage or someone that’s having
some kind of reaction to one of the medications they’re taking, and I could go on and on and on. I want you to know also that burning mouth can come about from people that have severe anxiety, depression, et cetera. So we run the full gamut as to what’s causing this burning mouth and sometimes we never find out. But I’d like you just to make sure that you’ve ruled out everything within our general region. Some women complain of altered taste sensation, they say their food just doesn’t taste the same since going through menopause. It either tastes salty, peppery, or sour. You know, we really don’t know why that is but this is some of the issues that have been reported in the literature but we don’t know the physiological basis for this because altered taste sensation should not change as you age. Just like xerostomia, in someone that’s healthy they don’t have decreased salivary flow. So why do some women in this time complain of dry mouth xerostomia? Maybe it’s one of the 700 and some medications that they’re taking that are causing it. Maybe there’s some other issue. I don’t know, but it is a common complaint, dry mouth, during this time.

Now, we may see some oral mucosal changes; we may see gingival atrophy. The gingiva looks pale, atrophic in appearance; we may see shiny red menopausal gingivostomatitis, that’s a terminology coined by the AAP. I do want to share this case with you. I, as I mentioned, I saw some of these patients with Dr. Louis Rose, a periodontist and physician who I was with for many years and this patient presented to him and I worked this patient up with him and she was a 51 year-old Caucasian woman that came in with a chief complaint that she’s had this red band around her upper teeth for a while. And when we took her medical history she really didn’t have anything that was contributory. She had pretty much of a negative medical history. She was not taking any medicines at the time and she had not seen a physician or, by the way, a dentist for quite some time. I have to tell you something else, that no one in the facility where we were was involved with her dental care and nobody did these crowns, so they were done before she came to seek our advice. And, you know, after we took this medical history we decided, you know, we don’t need to refer her right away for a medical workup, let’s see what she looks like after we try to clean her up. Well, after several hygiene visits, really there was just no change in the appearance of her gingival tissues. So it had been no help at all and she was actually instituting a good homecare regimen and we saw no change. So that’s the time that we took a back seat and said, “Hmm. We’d better send her for a medical evaluation because she’s not responding to our initial therapy.” So we referred her to an internist because she hadn’t had a physical in a long time and he did a workup and he referred her to a gynecologist as well; she hadn’t had a GYN exam in many years. It turns out she went through early menopause which is defined as menopause before the age of 45. Remember, average age is like 51 and early menopause is menopause before the age of 45. And low and behold, they found she was severely estrogen deficient, they put her on estrogen therapy and look at what these tissues look like after a few weeks on the systemic estrogen therapy! Now, I can’t say in light of what has come out from the women’s health imitative about hormone therapy, menopausal hormone therapy, and a higher incidence of breast cancer and heart attacks, strokes, blood clots, et cetera, I can’t say that a physician is going to put someone on hormone therapy at menopause for their gingival tissues. But, I do want to tell you that some women do still go on hormone therapy and the rule of thumb now is the lowest dosage for the shortest amount of time. And the main reason that they do go on it is for those psychomotor symptoms, the one that’s driving them crazy, and most often it’s the hot flashes. So, they may benefit, their oral cavity may benefit from being on this because estrogen is bone protective, it helps the periodontia. So, I can’t say that they would put them on just for the gingival tissues, but what is said is that we know that the vaginal tissues have a tremendous change seen after a few weeks of being on hormone therapy and we see the same, as you can see, with the oral tissues.
Now, when we talk about menopause for women, we need to talk about osteoporosis, low bone mass, and that’s when it really gets low and we know that this is a major issue for women; 80% of the cases of osteoporosis are women, 20% do occur in men. The numbers will escalate as the baby boomers are aging and when we talk about osteoporosis we’re really talking about one’s susceptibility to fracture. And what we worry about is an osteoporotic fracture. And I know today’s issues really are dealing with the oral cavity so I’m not going to go into it in too much detail, but we do know that things such as heredity, being of the Caucasian or Asian race will be a risk factor. We know that smoking is a risk factor; we know that small body frame, having a very low body-mass index, so we know that there’s certain inherent risk factors associated with your risk to fracture. So, what can we expect as members of the dental team to see when it comes to the oral cavity/head and neck region? We know that the jaws are susceptible to accelerated alveolar bone resorption. We know in a severely osteoporotic patient we see a greater incidence of tooth loss and residual ridge resorption. We know from studies that it may affect the severity of preexisting periodontitis. It doesn’t cause it; it may affect the severity of it. When asked, can we as members of the dental team make a definitive diagnosis of osteoporosis from a standard radiograph full mouth series - the answer is no. We can have a high degree of suspicion based upon our clinical findings, based upon our radiographic findings. We cannot make an absolute definitive diagnosis but we certainly will know enough to refer that patient to a healthcare provider to have a workup. And if that medical provider is very suspect of it, they will order a DEXA, which is the gold standard for diagnosing osteoporosis and one’s propensity for fracturing. And that stands for Dual Energy X-ray Absorptiometry, which is subjecting yourself to low levels of radiation at your hip, your wrist, and they look to see what your bones look like and what’s your risk of fracture.

So, I think maybe with digitalization coming into play with radiographs the software may help us to be more diagnostic but at this point we wouldn’t want to say we can make absolute diagnosis. But absolutely with your health history, your clinical exam, your radiographic findings, you will have some red flags and you will know enough that “Gee, it doesn’t sound right. I don’t see a lot of just local ideology to support this, maybe there’s something systemic going on, maybe he or she is osteoporotic.” Yet we know most commonly it happens for women.
So, I had mentioned this, that for estrogen – and now we call it menopausal hormonal therapy – but for the sake of this original study, it was with estrogen so I left estrogen replacement therapy. And the study supported that for each year of use of the estrogen that the risk of edentulism decreased and in this study it decreased by 6% so that’s pretty significant.

We also know that with estrogen supplementation that we see really an effect on alveolar bone loss and also on attachment losses.

We know that those individuals that are on estrogen supplementation that we see less attachment loss, less alveolar bone loss and
Estrogen therapy appears to have a very protective effect on the severity of periodontal disease. And this was published by Grossi.

Now, these three people all have things in common: 1) They’re all women. 2) They all have full-blown osteoporosis, and 3) They were all non-smokers. What was different was how they chose to manage their menopause. Now, keep in mind they already have osteoporosis. The one on your upper left, we wish all of our patients would look that healthy when it comes to oral health. I’m sure you’ll all agree. She decided to go on hormone therapy the minute she hit menopause. Look how beautiful her periodontium looks. The one on the right, she was in that 5% of people that still have these psychomotor issues years and years later upon hitting menopause. Most people don’t have it years and years later and she finally, after years and years went on hormone therapy. And what do we see? Remember, she already has osteoporosis. We see some significant breakdown. The one in the lower left, she was a naturalist. She had the bad psychomotor symptoms but she refused, as she told us, any type of hormone therapy and she just grinned and bared it, and we see significant periodontal breakdown. Interesting to know how all three of these osteoporotic patients chose to deal with their menopause and the very positive effects of the hormone therapy.

So that brings me to something that you’ve all been hearing about lately, and that’s osteonecrosis of the jaw bone. And we had heard about it initially with the intravenous antibiotics that were given in cancer management to some of our patients that have had breast, prostate, and other types of cancer and they were given IV biophosphonates and they ended up with osteonecrosis which is denuded bone and it can be painful. It presents in many different ways but
basically you don’t have healing of an area in 6-8 weeks. It could be after an extraction or you’ve seen this area that’s just not healing for that period of time and whether it be from denture trauma, we’ll talk about that, but it is an area that’s not healing and that patient hasn’t had radiation and the patient doesn’t have metastatic cancer to the jaw bone. So this is osteonecrosis and the new terminology is antiresorptive agent-induced osteonecrosis. This was brought forth, this terminology, in the November 2011 issue of Journal of the American Dental Association and I do have that reference for you on a slide to come up. We don’t really call it bisphosphonate induced anymore all the time because we’re now seeing other agents, other antiresorptive agents that may be responsible for this. So, I just want to give you some really key facts about this entity. We most commonly see this with IV use in the treatment of cancer patients. Not oral treatment with bisphosphonates or any other antiresorptive agent. IV use. The estimates of the incidence of this entity ranges from about 0.7% up to 13.3%. So, when we talk about intravenous administration of these antiresorptive agents, you are talking about the drugs that are most often the culprit of this entity, and those estimates for IV, that 0.7% to 13.3%. There was a good article on this in one of the recent issues of the Journal of the American Dental Association. I think it’s actually the February issue.

So, what do we know to be risk factors in comorbidities in patients taking oral antiresorptives? We know that invasive bone procedures like dental extractions may be a risk factor. We see this primarily in people over the age of 65; I know they call that older. I don’t think it’s so old but, you know what, I’m not going to put my personal vice in there as I get closer and closer to that age, but over 65. Clinically and radiographically apparent periodontitis, smoking, diabetes mellitus, denture wear. That’s a really important one. Even with minor mucosal irritation from those ill-fitting dentures, and prolonged use of bisphosphonate therapy. The longer you’re on a bisphosphonate or other antiresorptive agent, the increased incidence of it. So, risk continues to increase with extended drug use. And with bisphosphonates we’re seeing it primarily in those people taking it two years or more.

The risk factors go on: periapical pathosis, sinus tracts, purulent periodontal pockets, severe periodontitis, active abscesses that already involve the medullary bone and may cause osteonecrosis by themselves. So, to summarize that, preexisting pathology that’s seen in the mouth may cause this to happen. And these conditions can also exacerbate osteonecrosis once you already have it. And then there are those people that don’t have preexisting pathology, they don’t have one of those other risk factors and comorbidities that we just discussed on the previous slide. They have spontaneous occurrence. They went for their routine examination and either the dentist or the hygienist picked up that they have this entity. Spontaneous occurrence; they never knew they had it, it wasn’t painful. So, it was just picked up incidentally.
So, what is the incidence of this antiresorptive osteonecrosis of the jaw bone in a patient who does not have cancer? It appears to be very low. The highest current estimate is about 0.10%. That’s the highest current estimate. There are no studies to date that adequately address this incidence. We don’t have them yet. So the highest current estimate is 0.10%.

What is the clinical presentation of the antiresorptive osteonecrosis of the jaw bones? Well, some people present with pain; some have soft tissue swelling and infection; some people have loosening of their teeth; some may have purulent exudates, drainage and exposed bone; and then, as I mentioned previously, there are those people that are totally asymptomatic. Now, with my patient population, I specialize in treating those medically, mentally, and physically handicapped people that need dental care in an operating room setting in the controlled environment of a hospital. So I have a very specialized practice working with an entire team of two periodontists, two endodontists, two restorative dentists, an oral and maxillary facial surgeon, and all the specialties. I don’t treat children but we take these patients to the operating room and we provide this very comprehensive dental care for people that have these very compromising conditions that cannot seek dental care as we know it. So my long-term followup to see whether they got osteonecrosis from these antiresorptive agents, I generally can’t follow them. We send them back to the referring docs.

So, when I wanted to see this, my friend Dr. Jon Suzuki, from Temple University, a well known periodontist, gave me this slide. I happened to be at Temple that day lecturing to the perio grad students, and this is a sequester of bone that he removed from someone that has had osteonecrosis from taking alendronate, which is one of the bisphosphonates, it’s the very first one that was approved. So this is a sequester of bone in someone that had osteonecrosis from an oral bisphosphonate.
And this was a patient that was referred to my friend that’s a periodontist and you can see that this is the labial aspect of the mandibular teeth. We see the sequestered bone, the denuded bone, and we see what it looks like.

So, all patients taking any antiresorptive agent should be informed the following facts. This is based on the Journal of the American Dental Association guidelines and recommendations for treating these patients, and I thought I would go over these salient points with you. Antiresorptive therapy for low bone mass places them at low risk for developing antiresorptive osteonecrosis of the jaw bone. The highest prevalence estimate in a large sample is about 0.10%. And this is what you need to tell patients; the low risk for developing ARONJ may be minimized but not eliminated. And oral health programs consisting of sound oral hygiene practices and regular dental care may be the optimal approach for lowering the risk for developing ARONJ. That’s key. And that is what’s in your domain, an oral health program consisting of sound oral hygiene practices and regular dental care. And we need to educate our patients about this.

Currently, there is no validated diagnostic technique currently available to determine if patients are at increased risk for developing ARONJ. And, they’re really referring to a CTX test, which is a blood test that shows the turnover of osteoclastic activity and some organizations and some are recommending before surgical intervention that we look at the osteoclast activity, how many, and do a CTX test, which is a blood test, and that is the way you determine it. Well, to date, there is no validated diagnostic technique. There’s no proof that that test will be able to absolutely determine if your patient is at increased risk. And I think you should know that.

Discontinuing the bisphosphonate therapy may not eliminate any risk for developing antiresorptive osteonecrosis of the jaw bone. Whether it be bisphosphonate therapy or any other antiresorptive therapy, we don’t know yet about drug holidays; taking them off and then doing the procedure. They’re meeting now, a lot of the medical groups, to try to come up with how long people should really be taking bisphosphonate therapy on an oral basis. A lot of docs are taking their patients off of it after five years. If they’re not at really, really high risk; if they’re really high risk for osteoporotic fractures they’re kept on it. But you know, this just depends on the patient, as I said, and certainly if your patient has been on it for years you may encourage that patient to talk to their healthcare provider to see how long they have to stay on it or is there a chance they can go off of it. Yet, we can’t say if we take them off of it for a few months,
that they will eliminate the risk for developing osteonecrosis of the jaw bone. Now, I have to bring a very important point here. I said if “we” take them off of it. We don’t take patients off of their medication; we didn’t put them on it. Their healthcare provider put them on this, they’re the ones, if they need to take them off of it for whatever reason, they take them off of it. Not members of the dental team. So I reiterate; while I said if there is a decision that the patient is going to come off the antiresorptive therapy, we as members of the dental team do not take them off of it. It is left up to our medical professional colleagues, their healthcare provider who put them on, to take them off of it. Certainly we, if there’s a problem, we take them off of it and they fracture their hip, you do not want to be implicated for this. So, this is an issue between the patient and the physician and we really can’t say at this point that by discontinuing this therapy, that it absolutely eliminates any risk for developing this.

These are pertinent points that I summarize regarding osteonecrosis from the antiresorptive oral agents, from the Executive Summary of Recommendations from the American Dental Association Council on Scientific Affairs, it was published in JADA November 1, 2011, vol. 142 no. 11, pages 1243-1251. Just put out a few months ago; I strongly urge you to go online or use this article as your reference to keep you up to date. And this is now. The research is constantly evolving so this will be updated.

That brings us to oral contraceptives, one of the most widely used means of birth control in the world.

And, yes, you may have an effect on the oral cavity but it’s very minimal. We couldn’t always say that. When the birth control pill came out decades ago, we saw a higher amount of estrogen in the pill and we saw more of an incidence of gingival inflammation associated with that. You can on occasion see it, but it is not all that common. These are some issues, very mild inflammation that you can see on these two women taking oral contraceptives. I mean, if you do see this occurring in your patients you may just want to have them in more frequently for their hygiene visits. Very rare is it that it’s so severe that you would need to talk with the healthcare provider to use another means of birth control. We generally just don’t see that in this day and age, with a much lesser amount of the hormones in these pills.
Women's Oral Health Issues

We may see changes in salivary components. Certainly, the patient is not going to be aware of that. The change in pH, hydrogen ion concentration, certain enzymes, but really that’s academic. Xerostomia: yeah, some women taking birth control pills may complain of dry mouth, nothing that’s different than the other times in women’s lives when we see these hormonal changes. Gingival melanosis in some fair complected, light skinned women. We may see hyperpigmentation on the attached gingiva. It’s perfectly benign, it’s just an occurrence that is sometimes noted, and then increased incidence of localized osteitis, dry socket. We see that especially in the original studies that were done in 1977 with the higher amounts of hormones in these pills. It was a two-fold to three-fold greater incidence of a dry socket in those women that had tooth extracted on those estrogenic dates.

It’s always been said that, you know, certain times during the month that fibrinolytic factors are increased, other times they’re decreased. Certain times during the month the clotting factors are increased and other times decreased. This is how the pill cycle works. Of course, if we go to extract teeth we really don’t know when the fibrinolytic breakdown factors come into play. So, the probability of this dry socket will increase with the estrogen dose. Now with lower estrogen dose in the pills, you probably are not going to see it as much. However, you may want to discuss with the healthcare professional that’s following them, that put them on this pill, what are the non-estrogenic days? You know, all these pill’s cycles are different now. We used to say days 23 through 28 of the tablet cycle are placebos and they don’t get estrogen but some of the pills are different now. So, you put them on it, that saying the patient needs to have a tooth extracted, I want to minimize the risk of a dry socket, when do you think are the best days on the pill cycle for me or my colleagues to perform this procedure?

The other issue with oral contraceptives that I usually don’t think is a big issue, but unfortunately, it is still really in the literature and I know the ADA Council on Scientific Affairs still has it in the literature, and that is the inhibition of oral contraceptive effectiveness by concurrent antibiotic administration. Meaning you put someone on systemic antibiotics, they’re also taking oral contraceptives, and low and behold, the minute possibility of their birth control pill not being efficacious in preventing a pregnancy. It’s not going to work. Why this happens, we really don’t know. A lot of mechanisms, we have seen this with, you know, certain drugs of the time, but it is such a rare, rare entity.
Especially with ampicillin, penicillin, tetracycline, the main drugs we use could possibly decrease the effectiveness but, you know, it’s just a rare entity. The only cases I’ve really seen published in the literature where this has happened is the prescribing of the drug called rifampin, and rifampin is used to treat tuberculosis and we, as members of the dental team, don’t put people on rifampin. So, while this initial study that was reported in 1985, said that these drugs can possibly decrease the effectiveness of oral contraceptives it’s just not happening with the drugs like ampicillin, penicillin and tetracycline. We really don’t see it.

And other drugs, barbiturates, phenylbutazones, phenytoin sodium, these are all the generic terms. It’s been possibly reported. I mean, it’s been reported to occur very rare but you have to tell the patient of the infinitesimal risk. When you prescribe an antibiotic and you know they’re on birth control pills; because remember, you found this out when you took your health history; that’s medications and I definitely ask about it because some people don’t consider oral contraceptives to be medication. So I ask them specifically, just like I ask aspirin specifically because people don’t consider that and other over-the-counter meds to be an important thing to tell members of the dental team. Why? Because it’s only something they take, that’s what their thought is. But we all know that is not the case. So, because of everything that’s still in the literature and still when they go to a pharmacy to get a prescription of an antibiotic filled, you will see on the package a little black box warning that if you’re taking oral contraceptives that you are advised, you know, not to, to take heed. That this is a chance of pregnancy.

So, what do you tell your patient? Well, you have to advise your patient to use an additional method of contraception for the time they’re taking this antibiotic. And the physician or other healthcare provider may advise oral contraceptives containing higher levels of the estrogen if they have to be on the antibiotic for a period of time or they just tell them to use another means of birth control. So, you know, I don’t mean to be an alarmist. In summary, it is a very rare, rare entity. And certainly, I mentioned and I reiterate, it is not seen with the antibiotics that we may want to prescribe in our prac-
tices. Yet, because this statement is in place in the literature, in the ADA Council on Scientific Affairs, we do need to advise this patient to use an additional method of contraception, and explain to them why. What I really hope is that the patient won’t be noncompliant in taking an antibiotic they may really need because they don’t want to use another means of contraception. So, if it’s real important that they need this antibiotic, which I’m assuming it is if you put them on it, please advise them that they must take this antibiotic.

Now, I’d like to just address a few orofacial conditions that are more prevalent in women without going into very much detail, but these are studies that came out of NIH and of the National Institute of Dental and Craniofacial Research.

You know, it’s very interesting the purple bar graph depicts women, and I believe that’s light blue, men. And what we see is a rare incidence, by far, of jaw joint pain in women. Temporomandibular dysfunction, TMD. We also see burning mouth more common in women and facial pain more common in our female population. There are lots of reasons that can account for that and it’s really not something I’m going to go into in detail but just to let you know that we see a greater incidence of these things in women.
The next topic is domestic violence, and I do have to tell you, some people feel it’s more appropriate to title it intimate partner violence. It can occur in heterosexual relationships, homosexual relationships; it doesn’t have to be someone that actually lives in with you but someone that you have a very close relationship with.

So, whether we call it domestic violence or intimate partner violence, we’re referring to coercive or controlling behavior and/or intentional acts of violence between people currently or previously involved in intimate or familial relationships. And that’s really the definition. And, why am I bringing this into this lecture on women’s oral health issues - because intimate partner violence has become epidemic. Our former surgeon general said it’s as common as giving birth. It’s about the same number of people involved in these violent situations as the number of people that are giving birth. It’s epidemic today.

We, as members of the dental team, need to know about this. It includes a wide range of behaviors. We see physical abuse, very commonly abuse to areas that we will come in contact with on a daily basis – the oral cavity, the head, the face, the neck - and where we may not see, the breasts, the abdomen, and the groin. But these people are finding their ways to our offices, to our emergency rooms and very often the perpetrator will bring the victim in and will want to occupy your examining room, your operatory. And they will want to talk for the patient because they don’t want the patient, the victim, to really say how these injuries occur.
So, should you be suspect of this with someone coming in with bashed in teeth, with bruises on their face, with injuries to anywhere on the head and neck region. You need to ask, “Did someone cause these injuries to you?” And you need to ask these questions with the person that brought them in waiting in the waiting room, not where they can talk for the patient. One of the tell-tale signs when you start questioning the patient, the story starts changing all the time. You will notice that, we saw this with one of our formal dental assistants, and I had been really highly suspect that she was a victim of this spousal abuse, and we would see her coming in bruised and would say, every time you asked her it was some kind of weird thing. It was icy, she slid down the pavement into the mailbox, and finally, you know, we found out that this was caused by her husband who she was in the midst of getting a divorce. So please don’t just brush this aside but question the patient. That they’re asking all healthcare professionals to ask in their histories, “Are you involved in a relationship with anyone that causes you physical or bodily harm?” and I think that’s important; bodily harm or physical injury. And you need to confront this, whether it’s you that’s asking this or the dentist, somebody that’s taking the history really needs to confront this. Now, psychological abuse and economic abuse and sexual assault that are all the range of behaviors with this type of violence we may not be privy to. You know, psychological abuse where they’re tormenting you, threatening to kill you, economic abuse where they’re not giving you any money to live, and sexual assault. Very, very scary. And this is very common today.

Now, this is the poster woman for the American Academy of Cosmetic Dentistry. I’m not a member of that group but they sent me her slides. They know that I include this in so many of my lectures around, wherever I go to speak about domestic or intimate partner violence, and this woman was in a very abusive relationship with her husband and ended up she had her teeth bashed in. I mean, this lady really looks really very unkempt looking.
And this organization, the American Academy of Cosmetic Dentistry, in conjunction with MicroDental Lab, several years back made it their initiative to help get their mouths in an optimal state of health. And, they really did this as a labor of love and treating these kinds of patients and look what she looked like after they really, really did marvelous with her mouth. Doesn’t it look fabulous?

Look at the difference from the before and after. I mean, look. She got rid of the perpetrator, she got on her way to a great job and just look at her following the completion of her treatment and her extreme makeover! She’s one of the fortunate ones that made it through. Unfortunately, some people try to get restraining orders and it’s too late and they find themselves to be in a very horrible position where their lives are threatened. Some succumb to death because of this and if there’s anything we can do to prevent this, I strongly recommend it.

I recommend all of you to know the resources in your area to get these people help. All local communities have resources free of charge for these people, whether it be social workers, whether it be medical help, whether it be legal advice, whatever. If worse comes to worst, call this National Domestic Violence Hotline or go on their website. And this is the phone number, this is the website, and try and find out what is in your community or at a city level, state level, so these people can get help before it’s too late. And you need to be forthright, really, in your questioning to these people and to everyone. That’s why they say everyone should be asked, “Are you in a relationship,” all women, “with anyone that causes harm to you - physical or mental harm to you?”
And then we’ll talk about eating disorders, another sort of depressing subject, because that, too, is epidemic in our society. On one end of the spectrum we have obesity being epidemic; today 2/3 of our population being overweight. On the other end of the spectrum we have those individuals that are involved with disordered eating involving bulimia and anorexia. Bulimia I really want to talk about because we may see those individuals that are involved with bulimia that purge in different ways. Basically, with the bulimic behavior you’re eating all those yummy tasting, high caloric, great tasting, as I mentioned, foods only to want to purge in some way so you don’t put the weight on. So one way of purging is via vomiting, taking laxatives, taking diuretics, some people along with that are fasting, some people are doing enemas, I mean, just all kinds of ways. Any way you can to purge.

Now, let’s talk about purging via vomiting. What we see, after engaging in this type of behavior, it usually takes about two years go get perimylosis, which is the smooth erosion of the enamel that we see in these patients. It occurs on the palatal surfaces of the maxillary anterior teeth. It’s the first place we’re going to see this. And we generally see this occur, as I mentioned, with behavior going on for about two years. However, if they’re doing this 50-60 times a week, you may see this erosion occur from the acidity in the stomach contents on an earlier basis than two years. You might see it sooner. So, you know, when you question your patients, “Are you engaged in binging and purging via vomiting?” They’re going to know all these things because they see the situation in your mouth where you have erosion of your enamel. One of the very first things they’re going to tell you is, “No, I drink a lot of soda, I have GERD, gastroesophageal reflux disease,“ they’re going to tell you everything they have read about on the internet that causes this erosion of their teeth. And you have to be very forthcoming in communicating and being very sympathetic but you need to ask these questions because we try to get these people help, because it’s not just what they’re doing to their mouth; it ends up being a multi-organ disease in a lot of these patients that can lead to death. So bulimia and anorexia, anorexia is generally when they starve themselves when they are much below their normal body with their weight for their height, and sometimes you have a crossover. Some bulimics are anorexic, some anorexics are sometimes bulimic; so we may see these oral problems in the bulimics or anorexics. As I mentioned, one of the key oral issues you will see will be this perimylosis, this smooth erosion of the enamel and generally it starts to occur first place on the maxillary teeth on the palatal surfaces of the anterior region.
Now, when it becomes generalized and affects the posterior teeth as well, you may be left with an anterior open bite, loss of vertical dimension. And this patient that I’m showing you happens to be a patient of my former associate at the hospital, Dr. Shirley Brown, and Dr. Brown is a dentist as well as a psychologist, specializing in patients with these issues. This patient was referred to her. And this is not a primary dentition. This is a permanent dentition where the teeth had to be reshaped because there’s such tooth destruction. So it left her with that anterior open bite.

Another complaint that I listen for all the time in these patients, especially the young woman coming in telling you her mouth is always dry. Okay, she’s not on any medications that may cause it. Is she anxious, is she depressed? Is she involved in vomiting a lot? Is she on diuretics that are not supplied by a physician, is she taking laxatives? Is she fasting? What’s causing this xerostomia in this young woman? Now, I say young woman, but eating disorders are not always the younger woman. It could be the middle-aged woman. It could be in men. We’re seeing more and more of this in our wrestlers and men that have to be thin for lots of reasons. Or they just want to be really very skinny. While eating disorders predominately affect women, we can see it in men as well.

Now, another problem affecting the head and neck region is the enlargement of the salivary glands, usually the parotid gland. And it can occur anywhere in about 10-50% of people engaging in this type of behavior of binge/purge via vomiting. And we don’t really know physiologically what’s causing this. Probably from constantly vomiting they get the swelling of the salivary gland that will be intermittent in the beginning and then it just really remains for a while until they give up this kind of behavior. And here you see, adjacent to the ear we see the swelling of the parotid gland. It’s the most common salivary gland that’s affected and it’s painless and you know, they don’t like the way that looks so that might bring them in to see you. So, this is another tell-tale sign.
And remember, I told you I would tell you what I think of first. I know in oral pathology they tell us infection; a stone, a sialolith in the duct; but in a young woman coming in with swelling in the parotid, it can be unilateral or bilateral, you know what? I’d go where the money is and one of the top things on my differential is that they’re purging via vomiting and they have an eating disorder. So, I told you I’d get back to what I think is one of the more common reasons for it, not menses. I’ve never seen it with that. And this is what this looks like in this patient. You know, you can’t rule out the fact that it could be infection or a sialolith but this is very important to consider as well.

Another tell-tale sign, you look for trauma to the oral mucosa and pharynx. Why? In the initial stages, you need to stimulate that gag reflex to vomit. So we look for these ecchymotic areas in the soft palate and we may see this trauma due to them using fingers, pens, combs, any object to stimulate that gag reflex. After a while, they really don’t need to stimulate it but I look for trauma to the juncture of the hard palate and soft palate and look for these ecchymotic areas.

Now, this is a woman and we see lanugo, which is the facial hair. Her hormones are totally messed up, she’s bulimic and anorexic. She’s over-closed. We see she has angular cheilitis which is another thing that can go along with this type of behavior. Why? Vitamin deficiencies, she might be irritating inducing the gag reflex, for a lot of reasons. She’s over-closed, she might be dehydrated and this is someone that they didn’t think she’d pull through but she did. And she’s suffering from both bulimia and anorexia.
So we saw the angular cheilitis on that, we saw she’s over-closed, and this is another tell-tale sign. We look for hypercallus formation on their knuckles. Why? Because when they’re using their pointer and middle finger to stimulate that gag reflex, some people, of course those with the maxillary dentition, what will happen is these two fingers are used to stimulate that gag reflex and their rubbing the knuckle against their maxillary teeth. So what happens is you get hypercalcification on that knuckle. They call it Russell’s sign, R U S S E L L S, and it’s named after Dr. Russell.

So this is the hypercalcification of the knuckle and we see that where that pointer is depicting.

So what do we do for these people? Well, the key thing we want them to use artificial salivas for xerostomia, for their dry mouth. We know that that is really going to be one of the main issues that they’re going to have this very dry mouth. We tell the patient – this is key – not to brush their teeth immediately after vomiting. We feel, and it’s sort of, you know we used to think it was anecdotal but it’s pretty much substantiated that when you brush your teeth immediately after vomiting that you may be burnishing some of the acid into the teeth. So that’s why we tell them to wait a period of time. So what is the key thing that we really want them to do? What we want them to do is to rinse their mouth out with water immediately after vomiting. That’s the key thing, because we don’t know where the people are vomiting. We don’t know if they’re on the run doing this where they don’t have any agents with them to use. So we want them to at least go rinse their mouth out with water so they’re getting a lot of that acidity out of their mouth. For this, we’d like an over-the-counter fluoride rinse, and that’s after the water if they have it with them, to neutralize the

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Dental Management of the Bulimic Patient

- Use of artificial salivas for xerostomia
- Advise patients not to brush teeth immediately after vomiting
- Rinse with water
  - Can be followed by 0.05% sodium fluoride rinse
    - Neutralizes acids
    - Protects tooth surfaces
Dental Management of the Bulimic Patient

- Daily home application of 1% sodium fluoride gel or 0.4% stannous fluoride water-free gel in custom trays
- Promotes remineralization of enamel

- Regular professional oral prophylaxis
- In-office topical fluoride application
  - To help prevent further erosion
  - ↓ Dentin hypersensitivity

- Only palliative treatment and temporary cosmetic procedures provided until patient stabilized psychologically
- Referral for medical supervision, psychological therapy and nutritional counseling

Acid and to help protect the tooth surfaces. Now, at home they may want to use a daily home application of a 1% sodium fluoride gel. This is the 1% sodium fluoride gel or a 0.4% stannous fluoride water-free gel in custom trays that you’ll be making for them. It’s important that they have these trays made to help promote remineralization of the enamel. They may also want to use on a daily basis, and I don’t have this on the slide, an application of 5000 ppm fluoride prescription dental paste to help with the remineralization and sensitivity. So that’s 5000 ppm fluoride prescription dental paste. See, we’re trying whatever we can to help this demineralization process that’s come about from this erosion from the hyperacidity of the vomitus.

They need regular professional oral prophylaxis; they need in-office topical fluoride application when they come to see you. So that helps prevent further erosion. It decreases the dentin hypersensitivity.

Keep in mind that for dental treatment, you really want to do only palliative treatment and temporary cosmetic procedures should be provided until that patient is stabilized psychologically. You put patients in their final restoration, the veneers, full coverage, whatever it may be; your case will fail if they’re vomiting so many times a day. It really will fail. So therefore, it really encourages you to be a member of the team and to talk to all members of the team that are treating this patient. It is key that that patient be referred for medical supervision, psychological therapy, and nutritional counseling. It’s not just their oral problems. It’s multidisciplinary in treating people with eating disorders. Depending on how bad
they are will determine what type of treatment is recommended. Some of these people are in such bad shape medically that they’re on the verge of dying. Of course they’re going to be admitted to an acute care hospital as an inpatient for treatment. Others may need residential inpatient kind of care in an eating disorder center, not in an acute care hospital but in an eating disorder center, which may be part of a hospital or a private entity. Some people may be treated on an outpatient basis. So it’s going to depend where they are in the course of this disorder. The key thing that you can do is to make that referral for medical supervision, psychological therapy, nutritional counseling. And if that patient is a minor, it depends on the state you live in as to whether you can deal with them directly or whether you have to go through their parent or guardian. The bottom line is, in my mind, if their wellbeing and health is in jeopardy and you’re threatening to lose this patient from some kind of serious medical issue, you’re going to have to get the parent or legal guardian involved somehow. I usually talk to a physician about this that they see, whether it be the pediatrician or another health care practitioner, and we usually make the decision together how we’re going to present this to the family. So, you have to be careful. I know with HIPAA and the patient and being a minor, but somehow when their wellbeing is really, really comes to task, I sometimes will let that go and I want the best for this patient and I don’t care who I have to get involved.

So, in conclusion, members of the dental medical team play an integral role in promoting young women’s health and helping to identify those that may be afflicted with an eating disorder.

I want to thank you for giving me the opportunity to meet with you today and again, I thank PennWell and I thank Philips for this educational grant to be able to have me do this, and I hope that everyone has gained more knowledge in women’s oral health issues to provide the best care we can for our patients.

Should any of you wish to contact me, you can feel free to email me at the following email address, that’s bjsdds@aol.com. It sometimes takes me a while to answer all my emails because I travel quite a bit or else I’m in the OR, so I will answer you should you wish to email me and I would welcome it.
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1) The incidence of gingival inflammation exacerbated by hormonal influences may occur during
   A) Puberty
   B) Menses
   C) Pregnancy
   D) All the above
   E) None of the above

2) The following may be associated with menses
   A) Gingival inflammation
   B) Aphthous ulcers
   C) Activation of herpes labialis
   D) All of the above
   E) None of the above

3) What statement is NOT true when treating a pregnant patient:
   A) Prenatal care provider must be consulted prior to providing dental care for a healthy patient.
   B) Appropriate and necessary radiographs may be taken during pregnancy while protecting patient with lead apron and thyroid collar.
   C) Dental treatment is safe during pregnancy
   D) None of the above

4) The following may be associated with bulimia:
   A) Xerostomia
   B) Parotid enlargement
   C) Perimolysis
   D) All of the above
   E) None of the above

5) The following advice should NOT be given to someone with bulimia when it comes to maintaining good oral health:
   A) Brush teeth immediately after vomiting
   B) Daily home application of fluoride gel in custom trays.
   C) Rinse mouth with water immediately after vomiting.
   D) All of the above.
6) The following areas of the body are often injured as a result of intimate partner violence.
   A) Head, face, neck
   B) Legs, feet
   C) Breasts
   D) Groin
   E) Abdomen
   F) a,c,d,e

7) The following oral conditions may occur in women taking oral contraceptives.
   A) Gingival inflammation
   B) Gingival melanosis
   C) Increased incidence of localized osteitis
   D) All of the above
   E) None of the above

8) Pregnancy granulomas have the following characteristics:
   A) May bleed easily
   B) Histologically consistent with pyogenic granuloma.
   C) May be sessile or pedunculated
   D) May reoccur after removing
   E) All of the above
   F) None of the above

9) The following is NOT a true statement regarding osteoneorosis of the jawbone from oral antiresorptive therapy:
   A) Occurs at older age (over 65 years old)
   B) Always painful
   C) Spontaneous occurrence
   D) Invasive bone procedures like dental extractions is a risk factor
   E) Denture wearing (even with minor mucosal irritation) is a risk factor.

10) Highest current estimate for incidence of ARONJ is a patient who does not have cancer appears to be low. That is:
    A) 50%
    B) 1%
    C) 10%
    D) 5%
    E) None of the above