Dental Pain

The anticipation of pain is perhaps the biggest deterrent to the acceptance of professional dental care, yet the management of oral pain is perhaps dentistry's most appreciated virtue. We discuss this apparent paradox...

Q: Hi I went to this dentist and was told I needed a root canal. The first day she took the nerve out. On the second visit she started filling the canal. Now ever since I left her clinic I have been in excruciating pain. I have been on painkillers and still no relief. On the second visit the only time she x-rayed my tooth was after she was done filling. Do you have any suggestions on why the roof of my mouth hurts when I speak, eat, laugh, even when I sit and do nothing.

Thank you.

Although the intent of root canal treatment is to eliminate infection and pain, this does not necessarily happen immediately. Quite the contrary-- some amount of pain during and immediately after root canal treatment is to be expected. This is because the process may irritate sensitive tissues surrounding the root of the involved tooth. Additionally, septic material may be forced through the tip of the root during instrumentation, causing an acute flare-up of the pre-existing infection.

Your dentist should be made aware of your severe pain; he may be able to take steps to relieve your symptoms. Good luck!

Q: Three weeks ago I had a tooth filled. Now it seems sensitive to cold and hot. What does this mean? The dentist said it was a deep filling.

Some postoperative thermal sensitivity is normal, especially after a deep filling. This sensitivity may persist for several months. Occasionally, if the filling is made of a thermally conductive material, the tooth will continue to be more sensitive than other teeth, but this usually isn't manifest unless you expose it to something VERY hot or cold.

If the tooth becomes less sensitive over time, you can assume that no further action is necessary. If the sensitivity continues, is particularly severe, or begins to increase in severity, a return trip to your dentist is warranted...

Q: HELP! I always seem to get canker sores on my tongue, and they are annoying, and they hurt. What's a good way to get rid of them fast?

Unfortunately, we can put a man on the moon, but we haven't yet found an effective treatment for canker sores. In fact, the cause of these ulcers is still not well understood.

There was a time when canker sores were treated by cauterization with an escarotic (caustic) agent, such as silver nitrate or trichloroacetic acid. This approach is now believed to be of little use, and may further delay healing.

Perhaps the only way of dealing with these lesions is symptomatic treatment until they heal on their own. Warm saline rinses, oxygenating rinses (Amosan, Vince), application of topical anesthetic agents (e.g. Anbesol), or topical "bandages" (Orabase, Zilactin), all available over the counter, are useful in limiting the symptoms.

Q: I received a temporary filling for a root canal. One day the tooth started hurting and the dentist put me on penicillin for 10 days. I took the medication faithfully. Well, 3 weeks later, the same tooth, still with temporary filling, is in more pain; I believe it has an abscess. The pain started Sunday, my dentist is closed and today is a holiday. My in-laws have some penicillin I can start taking. Would it be ok to take some? I'm in a lot of pain, and the pain medicine I'm taking is not working. What do you suggest?

Whatever palliative effect that you might get from re-starting antibiotics would not result in any pain relief before tomorrow at the earliest. It is generally not appropriate to use medication prescribed for others, or for a use for which the medication was not specifically prescribed. There are different types of penicillin; in fact, many people use the term "penicillin" in the vernacular as a general reference for many different antibiotics. It is risky to use antibiotics in an inappropriate fashion.

In our experience, the most effective over the counter oral analgesic is ibuprofen (Nuprin, Advil, or generic), and may be used to good effect as long as there is no history of allergy or peptic ulcer disease. If you have not tried this yet, we would advise you to do so. The kind of relief that will result from your dentist draining the infection will be more immediate and effective than any medication.

Q: Can a bad tooth cause sinusitis ...or is it that sinusitis just causes a tooth to feel bad? I had a root canal done on a tooth that was filled but never capped..I lost the filling in that tooth, havent gotten it refilled, I don't have the money to get it done. ....Now I have sinusitis and the tooth is very painful. What should I do?

Can a bad tooth cause sinusitis ...or can sinusitis just cause a tooth to feel bad? Both! The roots of the upper molars and premolars can be situated either close to or within the maxillary sinus. The teeth and the sinus are also supplied by branches of the same sensory nerve. As a result, pain originating in one of these structures may mimic pain from the other. Also, infection from a dental abscess may extend into the sinus, although the reverse is uncommon.

It's unlikely that your failure to properly restore the tooth is the cause of your current pain, although it is possible that a vertical fracture of the root could account for the symptoms. It is also possible that the root canal treatment is failing and the infection has returned. Finally, it is also possible, as you have guessed, that an unrelated sinus infection is causing pain, and your dental status is irrelevant to the problem.

Your first priority should be to eliminate the pain and a possible infection; restoring the tooth is a secondary consideration now. We'd advise a visit to your dentist to either rule in or rule out a dental infection. If none is found, a visit to your personal physician is in order, as a sinusitis is not withing your dentist's jurisdiction to treat.

Q: My father who is seventy five years old recently changed his dentist and was surprised to be told he needed four fillings, although he was not in pain. He had previously been with a UK private dentist (with regular 6-month checkups) but switched to NHS to save money. The new dentist uses fresh garduates from the EEC countries. After one of the four fillings, he complained of a dull ache and sensitivity to hot drinks. He returned to the dentist who found no obvious problem. My question is, what should he do next and what are the common causes associated with post-dental filling operations.

The placement of a dental filling has an irritating effect on the pulp of a tooth. This can manifest as increased sensitivity to extremes of temperature. The severity will depend on the depth of the filling, the amount of heat generated near the nerve while drilling, the technique and/or filling material used, and the pre-existing state of the dental pulp. Transient thermal sensitivity is not a serious sign, and usually disappears over several days to several weeks. Sustained sensitivity, or sensitivity that increases over time, is a red flag that something is amiss in the pulp of the tooth. We would advise your father to wait in order to determine whether the symptoms are trending up or down in severity. If several weeks have passed and there is no improvement or if the situation worsens, this merits a return visit to the dentist.

Q: When I eat or drink my jaw tingles for a little while and then stops. This just occured recently but seems to be getting worse. I'm not too worried about it but I would like to know what it could be. Any thoughts? Thanks

This would be speculation, but what you describe could be either spasm of one of the jaw muscles, or inflammation in a salivary gland. Since you describe the phenomenon as occuring when drinking (which does not involve chewing), we'd give higher relevance to the salivary gland inflammation. This can occur as a result of certain medications, viral infections, or obstruction of the salivary duct. Other possibilities would include Eagle's Syndrome (calcified stylomandibular ligament) or trigeminal neuralgia, but these are less likely diagnoses. If the problem continues, we'd advise a consultation with your dentist.

Q: Follow-up question: I went to the dentist and he said the jaw and glands were inflammed from teeth grinding; they fit me with a night guard and said that it would help. Does it sound likely?

Tooth grinding (bruxism) could cause pain in the jaw muscles, but not in the salivary glands. Sore jaw muscles would not explain pain when you drink fluids (most of us don't chew our drinks!), but it's conceivable that muscle spasm could be exacerbated by application of cold stimuli to the affected muscles. It's worth a try, but it sounds like your dentist is trying an educated guess rather than working with a confirmed diagnosis...

Q: What are canker sores and how do I get rid of them in my mouth?

Canker sores, known technically as apthous ulcers, are of unknown cause. They have been associated with certain types of bacteria, but direct cause has not been established. They may occur singly or as multiple lesions; in certain recognized syndromes they may form giant apthae, which are quite debilitating. They form on the loose movable tissue on the floor of the mouth, tongue, cheeks, and occasionally the throat.

Canker sores have been remarkably unyielding to new forms of treatment. Often, the most that can be done is to make them more comfortable while they heal. Topical agents such as Zilactin, Anbesol, and the like provide an anesthetic effect. Intraoral bandage preparations such as Orabase also provide relief. Orabase can also be formulated with a corticosteroid, but this is usually reserved for more severe lesions, and is only available by prescription.

Q: What can a dentist do to alleviate the problem of sensitive teeth? Are there any other more permanent options than special toothpastes such as Sensodyne?

Whenever a patient presents with sensitive teeth, a thorough diagnosis must be made. Whether there is a cavity, post-operative symptoms from a deep filling, an acute pulpitis or degenerating nerve, an undiclosed fracture of a tooth, or idiopathic tooth hypersensitivity, the presenting symptoms may be similar. This may include a sensitivity to heat, cold, pressure, or tactile stimuli greater than that which is normally expected. That is why it is important not to jump to a final diagnosis too soon.

If the more serious possibilities have been ruled out, only then should a dentist prescribe a course of symptomatic treatment for tooth hypersensitivity. The use of desensitizing toothpastes such as Sensodyne has the advantage of being an inexpensive, effective, conservative approach that can be continued indefinitely. It is true that this is not a permanent cure, but continued use of the toothpaste can perpetuate the salutary effect. This is not a liability, since most persons will use a dentifrice anyway when they brush; it is no more effort to continue to use the desensitizing toothpaste than any other.

In addition to such toothpastes, the dentist may administer chemical desensitizing treatments in his office; these treatments may be more effective, but also need to be repeated to maintain their effectiveness.

As a last resort, if the areas of the tooth that are sensitive can be identified, they can be covered by either a thin layer of bonded resin or a filling. We prefer to avoid this if possible, since these fillings, if next to the gum line, can accelerate the rate of gum recession, necessitating "chasing the gum down the root" with additional fillings in the future.

Some things you can do:

- Avoid prolonged contact with highly acidic substances on your teeth (citrus juices, vinegar, acidic soft drinks such as colas).
- Examine your tooth brushing technique; overzealous brushing is often a factor in gum recession. Also, make sure your brushing and flossing is acheiving its goal of controlling and removing plaque, which will also accelerate gum recession.

Q: Recently I felt pain simply by chewing my food. I found out that one of my teeth is a bit "exposed". What I mean is that the bottom of it has gone a little flat, like it's edge has been polished down leaving it kind of bare so that even a gentle rub at that area is causing pain. What do you think is the problem and how can I fix it? Is it absolutEly necessary to see a dentist?

It sounds like you've worn through the enamel on the chewing surface of a tooth, exposing the underlying dentin. This can result from habitual tooth clenching and grinding, excessively abrasive diet, poorly formed soft enamel, softening of the enamel from an acidic diet or frequent vomiting, or an opposing tooth with a porcelain cap.

These areas seldom decay due to their highly polished surfaces and the cleaning action of the continued abrasion of these surfaces, which discourages plaque accumulation.

It is not absolutely necessary to fix it, but you may be more comfortable if you do. You may want to try a trial course of desensitizing toothpaste such as Sensodyne. In the longer term, you may want to be analytical about what is accelerating the wear on the tooth, and take steps to avoid it. You may ultimately need to have the lost tooth structure restored by a dentist if the abrasion continues.

Q: Hi! I was wondering if someone could describe the symptoms of oral herpes in depth for me. In addition, I heard somewhere that canker sores or cold sores are herpes; I wanted to know which one it is. Please help.

Oral "herpes" is caused by the herpes simplex virus. There are two common antigenic types: type I, which is generally associated with oral herpes simplex infections, and type II, which is most commonly thought to predominate in genital herpes infections. The distinction is not clinically significant, since either serologic type can infect mucous membranes almost anywhere in the body.

Primary herpes simplex infection usually occurs in infancy or early childhood, and manifests as a systemic viral infection, with malaise, fever, prostration, and an exudative rash or blisters in the mouth or other mucous membrane sites. The infection is soon suppressed, but is never eliminated; the virus persists indefinitely in the various sensory nerve cell bodies (nuclei or ganglia). In this behavior, herpes simplex is similar to other adenoviruses, such as herpes zoster (the causative agent of both chicken pox and shingles), Eptein-Barr virus, and cytomegalovirus.

In times of physiologic or other stress (surface tissue injury, for example), the body's immune mechanism is sufficiently depressed so that these dormant viruses can follow the nerve fibers out to their cutaneous endings, where secondary viral dermal lesions form. Even before the redness and blisters, there are prodromal sensations of pain, burning or itching. This is followed within a day or two by the characteristic red clusters of blisters, which rapidly break and form a crust. In the oral area, this is most commonly located at the muco-cutaneous junction between the skin of the lip and its vermilion border.

It is important to avoid contact with the lesions, since it is possible to innoculate the virus on other parts of your or someone else's body. This is particularly unfortunate if the virus spreads to the eye, where it may cause permanent scarring of the cornea.

In common parlance, oral herpes infections are called "cold sores" or "fever blisters" (canker sores, or apthous ulcers are unrelated to herpes). There is no cure for the permanent infection, but there are many over the counter preparations that confer relief from the itching and burning.

Depending on the frequency or severity of the herpes problem, your dentist or physician may prescribe certain antiviral medications, such as Zovirax (acyclovir), Famvir (famciclovir), Valtrex (valcyclovir), or Sorivudine (BV-araU).

Wisdom Tooth

Extract? Don't extract? It's not always so clear cut...

Q: I have some small teeth coming though my gums at the back of my mouth, I presume these are my wisdom teeth. They aren't painful but uncomfortable and a bit sore. What are wisdom teeth and what should I do about this?

The term "wisdom tooth" refers to what we in the profession call a "third molar", which is the tooth that is situated immediately behind the second molar. Time of eruption, position, size, and shape of these teeth are highly variable.

Because these teeth sometimes erupt into an improper position, problems frequently result. A tooth that is severely tipped or largely submerged beneath the gum is prone to infection in the surrounding gum tissue. Additionally, such a tooth may cause damage or decay to the tooth immediately in front (second molar). If a wisdom tooth is fully impacted (completely submerged beneath the gum), there is a remote possibility of cyst formation.

There is controversy regarding the wisdom tooth issue. Because these teeth usually aren't logistically important for chewing or other purposes, and because of the problems that commonly result from the presence of these teeth, oral surgeons frequently recommend that they be extracted when they fail to erupt properly. If you are of a cynical nature, you might conclude that the surgeons have a financial incentive to make such a recommendation, but there are legitimate arguments to be made. Counterbalancing the arguments for extraction are the potential problems resulting from extraction: postoperative pain, dry socket, bleeding, infection, or injury to the nerve supplying the lip.

We take a conservative approach. If symptoms are mild, we allow the patient to wait a period to see whether the pain disappears, persists, or worsens. If the frequency or severity of painful episodes merits it, we will recommend extraction. Similarly, if pathological change (decay, severe infection, cyst formation, etc.) occur, we will recommend extraction, even in the absence of symptoms.

If you are younger than age 20, you should know that your wisdom teeth may not have yet assumed their final position. Further eruption of these teeth may bring an end to your symptoms. Then again, it may not. We would advise you to consult with your dentist, since specific factors that you may present may render our treatment philosophy inappropriate for you.

Q: I have an abscessed/impacted wisdom tooth on the right bottom. Can a lower tooth abscess make your top teeth hurt and cause cheek/eye pain and swelling?

Pain from an abscessed lower wisdom tooth can indeed radiate to the top teeth and cause swelling of the cheek, as well as other neighboring areas. It's less likely to cause swelling or pain of the eye unless the infection is very severe and is spreading (cellulitis). We sincerely hope this is not the case, since this is a serious complication and demands immediate attention. We would advise you to play it safe and to visit a dentist ASAP!

Q: I think I'm going to need to get at least one of my wisdom teeth pulled because its pushing against the gums and it doesn't have enough room to completely come out. I take Toprol XL 50 mg for high blood pressure and I'm wondering if that will pose a complication with the surgery. Also, about 2 years ago I had a root canal done on one of my teeth and while playing basketball I was elbowed in the mouth and my tooth broke. All of the tooth is now level with my gums except for one side. My question is how will they grip that tooth to extract it and will my blood pressure medication pose a problem. Thank you for your help, I'm very nervous about going to get this done. Also, I don't have dental insurance, do you know where I can go to get this done affordably.

The removal of wisdom teeth is a somewhat contentious issue; there is no clear consensus among dentists under what circumstances wisdom tooth extraction is necessary. Sure, there are clear-cut situations when most dentists would recommend extraction: infection around a partially impacted wisdom tooth, cyst around impacted wisdom tooth, root resorption of an adjacent tooth caused by contact with an impacted wisdom tooth, etc. Just because there is insufficient room for a wisdom tooth to come in doesn't *necessarily* mean it must be extracted. You did not mention that your dentist recommended it be extracted, and we're not going to dispute any dentist who has had the opportunity to examine you in person. In all things we do, we must evaluate whether in our zeal to intervene, we create more risk than if we do nothing. Ask your dentist if you haven't already, rather than guessing that you may need to have the tooth extracted. As far as taking Toprol XL, this will not present a problem. If he is conscientious, your dentist will have taken a medical history and be aware of your high blood pressure. (If he has not taken a history make sure you tell him of your medical background.) He will avoid the use of vasoconstrictors in any local anesthetic he uses to avoid antagonizing your medication. You may want to consider conscious sedation or general anesthesia if this episode is unduly stressful for you. Toprol XL has no interaction with any other medication your dentist is likely to give you.

As far as extracting the broken tooth, we'd advise this only if the tooth cannot be fixed as determined by your dentist. You'd be surprised just how broken-down a tooth would have to be in order to be considered non-restorable! Keep in mind that replacing the tooth will in the long run be more expensive than fixing it up.

Extracting a fractured tooth that has broken to the bone can be readily done in most cases by the use of tools that can lever the root out by prying against the rim of the socket. It's quite routine, and there's nothing unusual your situation will present to your dentist.

As far as doing it inexpensively, we're afraid you'll have to do the same thing you do when you want to buy anything inexpensively--shop around (if it's not an emergency). I think that health care is sufficiently important, though, to consider quality before price. Ask a good friend for a referral!

Dental Implants

Perhaps more than any other development in the past twenty years, the popularization of implants has revolutionized the *science* of dentistry today. The fact that it has not made major inroads in the way dentistry is practiced day to day speaks volumes of the public's willingness to embrace new technologies in a "managed care" environment.

Q: What would the criteria be to deem an individual as an inappropriate candidate for dental implants, other than possibly immunosuppressed, diabetic or chronic smoker?

Would having insufficient bone present be taken as a definite refusal or would methods such as osseointegration and guided bone regeneration overcome this?

Dental implants are not as new as is commonly believed; early types of endosseous implants have been placed over 100 years ago. Despite that, the total number of man-hours of experience with this type of treatment is relatively small, since it is practiced relatively infrequently when compared with more conventional modalities of prosthetic dentistry. Consequently, the absolute and relative contraindications for implant placement are still not fully known. Several general requirements do apply, though:

- Implant candidates should be in relatively good health. Immunosuppression, diabetes, other endocrine disturbance, history of head or neck radiotherapy, etc., would make for less than an ideal implant subject.
- Sufficient bone must be present in a location suitable for placing a fixture where a prosthetic tooth is needed. In other words, a patient not only needs sufficient bone, but it must be in the right place.
- Vital structures within the bone must not obstruct proper implant placement. This is frequently a consideration when placing implants in the back of the lower jaw, where canals conveying vital nerves and blood vessels course through the center of the jawbone. The upper jaw frequently presents with a maddeningly large sinus in just the wrong place. This latter problem is currently being addressed by surgical sinus lift procedures, where the bottom of the sinus is elevated by the placement of natural or synthetic bone grafts.
- A patient who doesn't understand the newness of this procedure is apt to have unrealistic expectations; these must be reined in before treatment. Implantology has not had as many years of refinement as the more conventional modes of treatment (e.g., fixed bridgework).

The term osseointegration refers to the way bone closely approximates the walls of the implant fixture, and is inherent in all endosseous implants. It is not a means of improving the chances for success of an inappropriate treatment.

Guided tissue regeneration simply means the use of a non-resorbable (and lately, a resorbable) membrane to prevent the ingrowth of surface tissue (epithelium) into any surgical site. It may be used in conjunction with a bone graft procedure, but is not in itself a means of augmenting insufficient bone.

Suitability for implant placement depends on too many factors to rely on absolute dogma to determine whether a patient qualifies. Likewise, it's far too early in the game to rely on any hard and fast rules. The best that can be done is for the dentist to go with his admittedly limited experience, his gut intuition, and the patient's willingness to incur the uncertainties of a procedure relatively new to the world of dentistry.

Q: Are titanium implants worth the cost? What can go wrong?

Are they worth the cost? It depends on whether any benefits they yield are commensurate with their increased cost over more conventional approaches to tooth replacement. In situations where the time-tested approaches are likely to provide satisfactory results, we will generally guide patients in that direction. This is a personal philosophy; you'll hear others.

We think some of the arguments used to advocate superiority of implants are specious and show a lack of ability on the part of the dentist to take the perspective of the patient. For instance, here's one: "a single tooth implant is better and more conservative than a conventional 3-unit fixed bridge. Why drill down two perfectly good teeth if you can do an implant?" Well here's our answer: "Tell us what's conservative about cutting out a chunk of bone from the jaw?" In our experience, patients always dig their fingernails into the upholstery when we use the term "surgery".

That's not to say that implants don't present options in certain situations that cannot be approached in other ways; they are just another tool in a dentist's arsenal. We would caution our colleagues to not be in such a hurry to throw out hundreds of years of steady progress for the cheap, heady rush of "progress".

What can go wrong? Do you really want to read the package insert in every drug you take? Every medicine you take presents a remote chance that it will kill you, you know. It's not likely this will happen with good technique, but you did ask:

- infection
- injury to surrounding structures (nerves, arteries, sinuses)
- bone fractures
- failure of the implant fixture

These risks may be greater or lesser depending on the proposed location for the implant. Your dentist should fully explain the potential risks before you commit to any treatment, implants included.

Q: I paid five figures for dental implants. The teeth look like they came off a horse: huge and my mouth protrudes. My entire family is shocked; my friends say they look awful. These are full-mouth implants and look like Chiclets. The dentist told me he'd charge me EXTRA to re-do them. I argued with him, mentioning a lawsuit and he said, "ok; I'll order smaller ones and charge you ?????? but this time we'll go veeeeery slowly." (as if to punish me further)? I guess I'll have to comply but the stress of all this. The lab blames the dentist; the dentist blames the lab and myself for "rushing them" since I wanted them very quickly.

Should implants look like this (wearing horse's teeth) and am I being treated fairly?

Ideally, implants should not look unattractive. Sometimes compromises need to be made in tooth shape and position, depending on the location of sufficient available bone in which to position implants. If the bone is not sufficient to optimally position the implants, it is sometimes necessary to alter the inclination or position of the prosthetic teeth attached to them.

Treatment planning is key here. Positioning of implants should not be finalized before scoping out the intended position, shape, and size of the prosthetic teeth. If it is determined in advance that it is not possible to position the teeth in optimal position, other options must be examined, or at least the shortcomings of this approach should be fully explained to the patient. Unfortunately, it is not always possible to accurately predict results in advance.

Implant prosthetics is a collaborative effort between the prosthetic dentist and the surgeon, and sometimes the lines of communication are not fully utilized. Culpability is sometimes a shared affair; you should keep this in mind before you heap all the blame on the restorative dentist. Re-doing the work slowly is not punitive, but indicates an extra effort to get things right. Because time is money, you should know that your dentist will incur additional costs in order to make things right. He may be somewhat guilty of not having predicted in advance the extra costs both he and you will suffer, but unpredictability is inherent in the delivery of many aspects of health care. It's not always like hiring a general contractor and signing in advance on a pre-agreed fee; stuff happens. We are sure that despite the extra fee your dentist is charging, he is absorbing more of the cost of re-doing the work than you.

Q: I had a bridge in the front of my mouth that kept getting abscessed and my face would swell. The dentist told me that I would have to have the bridge removed and a partial denture put in. This is what I did, but I don't like the plate in my mouth. What I would like to ask is whether I have any other options. For example, I have heard that now they have posts that they can put teeth on. The dentist also said I have some bone loss.

There is a possibility that surgical dental implants (what you are referring to) may be appropriate for you. This will depend on the quantity and quality of the bone where the teeth will be replaced, the relative position of your upper and lower jaws, and the position of your sinuses and nasal cavity relative to the proposed location of the implants.

The fact that you had recurrent infection, and that your teeth were not extracted recently makes it less likely that this strategy will be successful. It doesn't hurt to ask, though. Ask your dentist about whether implants make sense for you; if he does not provide this service, he should be able to refer you to someone who does.

Follow-up Question:

Thank you for your response. After reading it I realized that relative to the implants, I left one fact out. The oral surgeon I was referred to took a panoramic x-ray and has already shown me I do not have enough bone where the implant is to be placed and it would entail bone grafting from my lower jaw and adding another implant rather than only one implant as recommended by my dentist. The oral surgeon is who recommended a full upper denture because he has concerns as to whether the implants would hold. I have become very hesitant now that I am being told the implants will involve bone grafting which everyone I have spoken to tell me is extremely painful and there is a strong possibility even after all the work is completed I still have no guarantee of success. Can you give me a percentage rate of success on the implants and other work?

We can only tell you in general terms that upper (maxillary) implants are less successful than lowers; we are not aware of any recent studies citing the statistics. Keep in mind that the statistics have little applicability if the data is collected on cases having favorable preoperative conditions, and your situation is less than favorable. However, the use of bone grafting before surgical implant placement is nothing unusual, and is becoming more common. Additionally, the bone used in grafting does not need to be harvested from your body; there are allografts (demineralized freeze-dried bone from human sources) and xenografts (treated animal bone), as well as synthetic bone substitutes.

We infer much from the industry that lives and dies by the collection of actuarial statistics: the insurance industry. On the application for professional liability (malpractice) insurance, they ask dentists three questions:

1. Do you render patients unconscious with general anesthesia?
2. Do you render Temporo Mandibular Joint (TMJ) therapy?
3. Do you practice surgical implantology?

They ask these questions because these areas are a "red flag" for them. Simply stated, these are the areas where there is the greatest rate of professional liability. We gather that these are also the areas of greatest patient dissatisfaction.

The profession of dentistry is highly competitive and is searching for new niches in which to practice. There is also something of an inferiority complex relative to our more glamorous cousin, Medicine. Dentists are scrambling to appear as "cutting edge" as they can. Our only hope is that the welfare of the patient doesn't get left behind in that rush...

Crowns & Bridges

Q: I have a large molar which had a large filling put in years ago. It started being sensitive to air, cold, and heat. The dentist said it has many "fractures" in the tooth so it needs a crown. Crowns are expensive these days, so I am wondering what other options might there be?

There are fractures, and then there are FRACTURES. There are always small fracture lines running through the enamel of all teeth, and these are of little consequence. More serious are those that propagate through the deeper layers of dentin; these definitely create structural weaknesses, and may even involve the pulp of the tooth. Unfortunately, it is sometimes impossible to determine the extent of fractures without removing the filling in a tooth, since they are not well visualized on x-ray.

The decision as to when a tooth should be restored by crown rather than by filling is a subjective one, but not necessarily a blind guess. A dentist with relatively few years of experience will know when a tooth is in danger of cracking; for those who are fresh out of dental school, there are general guidelines that are remarkably accurate in pointing the way to an appropriate treatment.

For teeth that need more than a filling, a crown is the most commonly prescribed restoration. There are other restorations that will protect the tooth against further cracking (e.g., onlays or 3/4 crowns), but a full crown has the additional advantages of superior esthetics, retention, and protection against recurrent decay. It is also not significantly more expensive than the alternatives.

Compromising the treatment by the inappropriate use of filling material may be a short-term economy, but will ultimately cost you more. In the end, the tooth will break, necessitating the treatment you perhaps should have done in the first place; the tooth may even become non-restorable and require extraction. By comparison, the fee for a crown may be a small price to pay...

Q: Which is more durable-- a crown made of porcelain or one of gold? Are there other advantages of one type over the other?When appearance is not a consideration (for instance, in a back tooth) which would you recommend and why?

Gold is slightly more durable than porcelain, but improvements in ceramic technology have narrowed the gap. We don't see nearly the number of porcelain fractures today as we saw 25 years ago.Porcelain has two advantages over gold: it looks better, and (marginally) it is smoother, so it tends to discourage plaque accumulation slightly more effectively than polished gold. This second difference is theoretical, and has little clinical significance.The one major disadvantage of porcelain is that it is so hard that it will abrade anything opposing it unless it's also composed of porcelain. Over time, this can cause significant loss of enamel on a tooth opposing a porcelain crown, requiring additional restorative treatment. For this reason, where cosmetics is not an issue and/or the opposing tooth is not porcelain, a gold crown is the superior choice.

Q: Are gold dental crowns better than porcelain-fused-to-metal crowns?

Whether a choice of restorative material is better or worse depends on its suitability to the specific situation. Most people wouldn't think of having a gold crown in a position where it would be plainly visible. It's mostly a question of cultural concept of aesthetics.

As a restorative material, many dentists favor gold. We suspect this has much to do with nostalgia for the "Days of the Giants", as our professors in dental school were fond of saying. Gold is a soft, ductile metal which is chemically and biologically inert, and easy to cast and machine accurately. This was not the case with early base metal ceramic alloys, which were hard, brittle, and elicited allergic reactions due to their nickel content. These problems have been largely eliminated in modern porcelain fused to metal crowns.

Although gold crowns can be highly polished, ceramic crowns are said to theoretically resist plaque accumulation better due to their highly glazed surfaces. We think oral hygiene has a greater impact on plaque accumulation, for what it's worth.

A dentist will tell you "there's nothing so beautiful as a well-done gold crown", but we suspect you won't hear that from a patient. What can we say-- dentists are a strange breed! ;-)

Q: This past year, I have had a few dental fractures and had one again last night!! I was biting down and--crack! What is wrong? Is it a lack of calcium? I don't drink much milk or eat much cheese. My dad had "soft teeth" back in the '40's and had them all extracted and got false teeth at 32 years of age. Have I inherited something like that from him?I have lots of fillings and several crowns now. What should I do?

Quality of diet is thought to have little effect on the strength of adult teeth.

Occasionally, there can be a sudden increase in the forces applied to the teeth, as is the case when a person develops a tooth grinding habit or seizure disorder. Assuming that this is not the case, the problem is some kind of structural weakening in the teeth themselves.

Teeth may be weakened by active decay, or by the placement of large fillings to restore decay. Often the weakening produced by the resulting loss of tooth structure does not manifest immediately. However, over time, chewing forces slowly act on these weak points, creating microfractures that propagate through the tooth until it finally breaks.

There are broad guidelines that dentists apply when deciding the proper way to restore a broken or decayed tooth. These guidelines occasionally point the way to an inappropriate treatment, or perhaps the dentist or patient compromise an "ideal" treatment plan for reasons of time or financing. In either case, a choice is made where a filling is placed where, in retrospect, a crown or onlay may be proven to have been a better choice of restoration.

It is probable that you are now reaping the result of just such past compromises. Perhaps large fillings were placed where a crown would have served you better. No matter; most fractured teeth can be restored by placement of a crown. This will reinforce the remaining tooth structure and protect it against future breakage.

We'd advise you to consult with your dentist. In addition to the broken tooth, he may be able to detect other teeth that have a high probability of breaking in the near future. If you dislike surprises, you may want to consider pre-emptively crowning these weakened teeth before they break.

Q: Hi! I am a 45 year old female and I take a lot of medications, one of them a steroid, which I have to take for serious asthma. My teeth are constantly breaking . I mean CONSTANTLY!! Like every week. I only have about 12 teeth left and my dentist will fix one and before my next appointment another one will break. I want him to just pull the few I have left and give me some nice pretty dentures. They are trying to get x-rays and impressions taken to make me a partial denture, but my gag reflex is SOOOOO very bad they could not even get x-rays! They even tried the baby films for x-rays! So, my 2 questions are:.

Is there ant thing I can do to prevent my teeth from breaking?

Is there anything my dentist or I can do so he can get some good x-rays and some impressions?

I would very much appreciate any help you can give me. Thank you in advance.

The most common cause of tooth breakage is the placement of large fillings, which structurally undermine the tooth. The placement of crowns on these over-filled teeth will usually reinforce the teeth and prevent them from breaking. Oftentimes, a dentist will place fillings when they may be inappropriate if a patient cannot afford the larger fee of a crown. This short-term economy can backfire if breakage results.The gagging reflex is a normal protective mechanism that serves to prevent aspiration of foreign material into the respiratory tract. In some individuals this reflex may be hyperactive, and interfere with dental procedures. There is nothing unique to your problem.

Dealing with gagging:

Sometimes the gag reflex can be temporarily suppressed by spraying a topical anesthetic such as Cetacaine on the sensitive areas of the palate and tongue.

Some dentists have dealt with this problem successfully through hypnosis.

It is sometimes possible to take a sectional rather than a full-arch impression, which will present less of a stimulus to gag.

X-ray technique usually will involve some combination of breathing exercises by the patient, flexing of the x-ray film packet to render it softer and more flexible, compromising on x-ray film placement in order to avoid sensitive areas, and sprint training by the dentist in order to get the film packet placed, exposed, and removed in the shortest period of time.

Failing that, a dentist may be able to use extra-oral x-rays such as a panoramic machine. These do not stimulate gagging, but may compromise the x-ray image clarity and resolution. If your dentist does not have a panoramic machine, he may be able to refer you to someone who does.

Be mindful of the fact that x-rays and impressions are brief experiences that pass quickly. More potentially problematic is the impact your gag reflex may have on your tolerance for removable denture prostheses. The more teeth you have extracted, the larger the prosthesis, and the greater the probability that you will have difficulties adapting. I would advise you not to be so quick to extract teeth that are salvageable.

Q: I had a triple root canal in a wisdom tooth about 4 years ago, and now the filling came out. I saw another dentist, who suggested I have a crown put on it this week. What exactly is a crown, how long does it take to put on, how long does it generally. last, what are the benefits/drawbacks, and what cost can I expect?

In choosing what kind of restoration is appropriate for a broken-down tooth, a dentist must decide whether a tooth is too weak to support or hold a filling. Restorations placed inside teeth depend on the surrounding tooth structure for their support. If this tooth structure is too thin or of insufficient quantity, the tooth and/or filling combination will break. That is apparently what happened with the filling in your wisdom tooth.

Rather than obtaining its strength from the surrounding tooth structure, a crown confers its strength to the tooth; it covers and surrounds the tooth, protecting it from potentially injurious chewing forces with its own inherent structural strength.

There are different materials used for crowns, usually some combination of metal and ceramic. Placement of a crown restoration usually takes 2 to 3 visits. The benefits of a crown over a filling include both improved appearance and durability. Crowns will generally last 10 years or longer.

Q: If money is no object and all-metal crowns are not to be considered, what is the "Rolls Royce" of crowns for a MOLAR. I know about PFM crowns and I understand they come in various categories, from base to noble metals, and even the latter are subdivided in subcategories. I also know about porcelain crowns. But I just read that there are new porcelain crowns that are supposed to be even better than PFM. So:

What is the best crown for a molar (precise name, please)?

Approximately when has this type of crown been introduced (months or years ago)?

What are its advantages (and disadvantages, if any, especially as compared to other types)?

The best crown for a molar? That's like asking which is better, a golf cart or a bicycle. The question is not whether one is better than the other, but which is more appropriate for the presenting clinical situation.

Don't get us wrong; there are certain physical parameters that define what is a "good" and what is a "bad" crown. These parameters apply regardless of the material used for crown fabrication. If the bite (occlusion), marginal fit, and contact with adjacent teeth are improperly or carelessly executed, the crown will be bad whether it is cast base metal or full sintered ceramic.

The decision is based more on a dentist's familiarity with a technique, the laboratory technician's skill with a particular material, and the clinical application. The cost of the material has no bearing on whether it is most appropriate for a particular application, either.

Full cast base metal crowns are entirely appropriate for use in second molars, for instance, since their silvery appearance does not present a cosmetic liability where it will not be seen; it is less expensive, and it is stronger than a ceramic restoration.

Base metal is also preferable for ceramo-metal fixed bridges, since it is more rigid than precious alloys, and will be less likely to flex and "pop" the porcelain.

Precious alloys are preferable where their softer nature permits milling of semi-precision attachments for partial dentures; in this situation, noble alloys have their advantages. All-ceramic crowns are less likely to show an obvious margin on a front tooth if gum recession occurs over time, though they are not as strong as ceramic/metal combinations.

Dental laboratory technology is no less prone to the hype that has permeated dentistry. There are new materials being developed and marketed all the time, in the hopes of curing problems that don't exist. These "revolutionary" developments necessitate tooling up and training, which are additional expenses that seldom yield any advantages over established technique. Far more relevant to the quality of a service is the care with which it is provided. Changing materials for no proven advantage forces the dentist and technician to work with new techniques with which they have little experience or familiarity.

Q: Last spring my dentist advised me to replace all of my amalgam fillings for porcelain. They are between 12-20 years old and not currently causing me any problems. Is this really necessary or are they trying to make more money off of me? The dentist says nothing lasts forever and she replaced all of my boyfriend's. He has been having sensitivity problems ever since.

I have an appointment to get half my mouth done tomorrow, so any advice would be appreciated.

There are only two reasons to replace an amalgam filling with porcelain:

You are dissatisfied with the appearance and you want it to look better, or there is new decay or breakage, and since you want it to look better, you would prefer a tooth-colored material.

You are the only person who can decide if an improvement of the cosmetic appearance of the tooth is in order. (Composite resin restorations DO look better, and many of our patients are pleasantly surprised by the improvement in their appearance.) BUT--if the answer is no, the dentist must be able to justify the new restorations for a reason. If it ain't broke, don't fix it!

BTW, post-operative sensitivity under composite resin restorations is common--more so than when placing amalgams.

Q: My dentist has twice now spoken of my teeth wearing down excessively, saying she has seen better teeth in 80 year olds (I'm 51).

My wife says I used to grind my teeth at night many years ago. Perhaps this is the cause and my dentist is not noticing that the problem is not getting worse. She wants me to avoid hard food, including carrots. (I've been eating a raw carrot after every meal.)

Are there any other factors that can cause teeth to wear?

All teeth wear due to functional use (chewing). This loss of structural mass is progressive; tooth material that is lost is never re-grown. Abrasion and erosion can also result from para-functional habits (clenching, grinding), abnormally acidic diet, and excessively vigorous oral hygiene.

If the enamel is worn through or there is significant gum recession, softer parts of the tooth (cementum and dentin) are exposed. These softer tissues are subject to a more rapid abrasion.

It is useful to analyze any non-useful oral habits and attempt to limit them or their adverse sequellae. In the case of nocturnal tooth grinding or clenching (bruxism), oftentimes a night guard appliance can help, although they tend to be difficult to get used to. Abnormal dietary habits (there are some unusual ones out there-- sucking on lemons, gargling with vinegar, for example) should be avoided. It is not practical to engage in excessive gymnastics to modify one's diet, since it's difficult enough to practice good nutrition without worrying about one's teeth; after all, chewing healthful food is the purpose of teeth in the first place.

Sooner or later, the only practical way of managing excessive loss of tooth structure is to restore it, usually by placement of crowns. This not only reverses structural loss, but also prevents further abrasion.

Root Canals

Despite its mostly undeserved reputation, the popularization of root canal treatment is one of the most significant revolutionary advances in the endeavor of saving teeth.

Q: Are there alternative treatments for root canal? Should some people get a second opinion? Is misdiagnosis possible in root canal?

Root canal treatment is most commonly used to treat infection originating in the pulp (nerve) of a tooth. (There are other reasons for which root canal is performed, usually to permit restorative or prosthetic treatment, but this is not germane to this discussion.)

Such an infection originating in the pulp may be treated in one of three ways:

- Root canal treatment
- Endodontic surgery (apicoectomy with retrograde apical filling)
- Extraction

Depending on the presenting condition of the tooth in question, one or another of these approaches may be appropriate. Sometimes only one alternative is possible, which narrows the choice. Of the three techniques, the first two are an attempt to save the affected tooth; the extraction should be reserved as a last resort when salvage is not possible.

Second opinions are advisable when either the diagnosis is not certain or there is any doubt on the part of the patient of the doctor's competence, trustworthiness, or openness to all potential alternative treatments. Many times a general dentist will refer a patient to a root canal specialist (endodontist) if there is an equivocal diagnosis. Yes, misdiagnosis is possible; after all, dentists are human.

Q: I had a root canal done 6 days ago on molar #19 (if that helps). I still have the dull ache off and on in that tooth that brought me to my endodontist in the first place. He said the x-rays were inconclusive, so suggested a root canal. It's a very dull throb, doesn't even keep me up at night, or so far hasn't gotten worse. I was hoping it would go away after the root canal. I'm now discouraged. It is off and on several times throughout the day. Why? I'm beginning to think it didn't even help. Any ideas?

Performing a root canal on a hunch is, by our estimation, rather presumptuous. It is always safer to proceed from a diagnosis to a treatment, rather than to use a treatment to confirm a diagnosis. There are three possibilities:

- The diagnosis was correct, the root canal was performed properly, and you're experiencing normal postoperative pain which will disappear with time. This is common.
- The diagnosis was correct, but for some reason the root canal did not eliminate the problem.
- The diagnosis was incorrect, the root canal treatment was inappropriate, and the original problem remains untreated.Only time will tell which of the three possibilities applies; let's hope it's #1. If the symptoms persist, a return trip to the endodontist is indicated.

Q: Are pain pills and antibiotics an acceptable substitute for root canal?

My reason for asking: I have had the same experience with the same tooth, four years apart. On a holiday weekend, I had an intense, almost unbearable toothache. Every dentist in town (including mine) was gone for the weekend or otherwise unavailable. In desperation, I called my family doctor, and he called in a prescription for pain killers and antibiotics.

The next day, the pain was gone, and my dentist later told me, "That tooth is dying, and you are going to need root canal". (And practically everyone I know who has had root canal had it while under these same circumstances - they were still in pain and desperate for relief.)

So I am wondering, if this only occurs every few years, and pain pills and antibiotics control it, will it hurt anything to treat it that way, instead of having root canal?

Your infection is not occurring every few years; it is a continuous, chronic infection, with periodic acute flare-ups. The problem with your way of treating the problem is twofold:

4. You never know when the next flare-up will be, nor how severe it will be. A severe dentoalveolar abscess may be a consequence.

5. Chronic abscesses progressively destroy the root of a tooth and its supporting bone.

We can assure you that if antibiotics and analgesics could successfully treat these infections, dentists would not go through the trouble of performing root canal treatment on their patients. If you want to keep your tooth in the long run, you will need to have root canal treatment.

Q: Hi..I don't know if I am explaining this right or not, but once the dentist drills the decay away and sees where the root and tooth meet (which means, the root is not exposed yet, and the tooth still lies over the root) (something like that) the procedure would be to not root canal at all...the dentist would lay some sort of protective coating between the root and the tooth and then fill the remaining top part of the tooth. DOES THIS procedure EXIST?

You have it mostly correct, but...

When there is deep decay, it is sometimes difficult to determine whether it has entered the pulp (nerve) of the tooth. The clarity of the image on the x-ray, or the spatial orientation of the decay relative to the pulp is sometimes difficult to interpret with precision. In this case, the removal of the decay (excavation) is both therapeutic and diagnostic. If an exposure of the nerve cannot be seen, it will generally indicate that the nerve has escaped injury, and the tooth will not need root canal treatment. Despite this assumption, the nerve may indeed be injured and later need root canal treatment, as evidenced by the development of symptoms at a later date. This is because a microscopic exposure may escape visual detection by the dentist. In any case, if the symptoms are sufficiently suggestive of a pulpal infection, it is usually assumed that root canal treatment is necessary, even if no exposure can be seen.

In equivocal cases, where there is deep decay that approaches the pulp but there are no symptoms indicative of infection, and there is no pulp exposure in evidence, the dentist may place a cement base under the filling in order to provide a measure of thermal insulation; if it's really deep, this is sometimes referred to as an "indirect pulp cap." There are situations where the same situation presents WITH a small exposure; there are some dentists that will perform a similar procedure in an effort to head off a root canal. This is called a "direct pulp cap." The direct cap is a controversial procedure, which is widely believed to be unsuccessful over time, leading to the eventual recurrence of infection.

Gum Diseases

As biomedical advances make inroads in the fight against tooth decay while at the same time prolonging life expectancy, the face of dentistry is changing. No longer is fixing cavities the predominant role of dentistry. The prevention and treatment of gum disease and the promotion of periodontal health has moved to the forefront of modern dental practice and research.

Q: Well for the longest time now my gums have been really sore. They bleed all the time and I have holes in between my teeth. Is there any one who can let me know what it is and how I can treat it? Someone told me that it was gingivitis or something like that.

Periodontal disease runs the gamut from mild gingivitis to severe periodontitis with bone loss. Most people are not equipped to make a precise diagnosis by themselves. Certainly I cannot determine the full nature of what you have from your description. Without a diagnosis, an appropriate treatment cannot be prescribed

Q: Is there any way to reverse a receding gum line?

There are gum grafting procedures intended for this purpose. They are variable in their success, though. I would suggest a consultation with a periodontist (gum specialist) if you wish to investigate this further...

Q: I am 26 and I am having problems with gum recession. How can I stop it?

Gingival (gum) recession is due to a variety of physiologic and pathological factors. In order to determine an appropriate approach to management and prevention, a proper diagnosis must first be made. If there is periodontal (gum) disease, it must be treated professionally, since this is amenable to self-treatment at only the earliest stages. There are some pre-disposing factors to gingival recession which are not under either a patient's or dentist's control, such as the shape and position of the supporting bone relative to the root of a tooth. There may also be instances of gum recession resulting from poor tooth position, which may be effectively managed with orthodontic tooth movement (braces).

If other causative factors have been eliminated, attention should be turned to oral hygiene technique. If a hard-bristle toothbrush is used, it should be exchanged for a soft nylon bristle variety. If an abrasive toothpaste is used (e.g., smoker's toothpaste), it should be dropped in favor of a milder type. Finally, if you hold your toothbrush in a white-knuckled death grip and scrub until you're spitting out gum tissue, you should refine your technique to a light grasp, using a gentle, short-amplitude stroke.

Once recession has occurred, it is prudent to attempt to limit any further progress. There are periodontal procedures intended to re-claim lost root coverage that have varying degrees of success; they are useful if the gum recession has produced a cosmetic deficit. Otherwise, you may need to deal with root surface hypersensitivity; this is usually manageable with one of the "sensitive teeth" toothpastes such as Sensodyne.

Q: Is it possible to restore gums that have receded because of disease?

Before an answer can be given, you will have to clarify 3 imprecise terms:

- Restore - if you mean restore the gums to their previous health, it is often possible. If you mean to restore the gums to their exact previous position and shape, it is somewhat less likely.
- Receded - do you mean just a change in the position of the gums without any inflammatory gum disease (periodontal disease), or is there a more serious underlying gum problem?
- Disease - are you referring to a constitutional, systemic disease, or a local periodontal (gum) disease?

If you have periodontal disease, priority should be given to eliminating the inflammation and infection. Subsequently, the issue of re-positioning the gum tissue higher on the roots of the teeth can be addressed. (The elimination of gum recession is not always practical, but has become more effective in recent years.)

If you do not have periodontal disease, it is sometimes possible to surgically re-position the gum tissue for greater root coverage. Again, modern techniques have improved the results of late. This is primarily a cosmetic procedure, but may also mitigate any root sensitivity you experience.

Cosmetic Dentistry

Perhaps there is no facet of modern dentistry that describes the "New Paradigm" of health care private practice as concisely as cosmetic dentistry. While the concept of rendering cosmetic dental service is as old as dentistry itself, the focus on appearance as the sole treatment objective is new. Savvy dentists have seized upon this opportunity to exploit the fact that it's easier to sell what people want than what they need. In so doing, the health care provider has moved beyond health care and into the territory of the cosmetician...

Q: What are the effects of whitening your teeth? Can it damage the teeth?

If by whitening you mean a dentist-administered bleaching treatment, it is currently thought to present little risk except for some short-term soreness of the gums and a transient increase in tooth sensitivity to heat, cold, contact, and sweets. It is a relatively new technology, and the long term cumulative effects, if any, are not known. This may be significant, since bleaching may need to be repeated at indefinite intervals to maintain the whitening.

The same degree of safety cannot be assumed for unregulated over the counter bleaching agents, due to the unknown nature of their content.

Q: My husband has darkened teeth from taking antibiotics as a child. Is there anything he could do to make them look white again?

Intrinsic stain (that is, discoloration of the tooth structure itself, rather than a surface stain) responds moderately well to bleaching. The difficulty presented by staining that results from tetracycline use is that it is not uniform, but usually presents as horizontal light and dark bands. For such teeth, the banding effect will remain after bleaching, albeit in a lighter color.

The only practical way of eliminating the staining you describe is by covering it up. This can be done by the placement of crowns, or more conservatively by placing porcelain laminate veneers. I would advise your husband to ask your dentist about these options.

Q: I am having 5 new caps made on my upper row of teeth. They will be made to match the colour of the two natural teath that I have on that row. My dentist suggets that I have those two teeth bleached first, and then have the new caps to match the colour of my newly bleached teath. My concern is that the bleached teeth may change colour over time and then all those new caps will not match them any more. I have not heard much about bleaching, and I certainly do not know anyone who has had it done to ask them. What do you think?

It is true that once bleached, teeth will eventually tend to relapse and darken. There's no reason why they can't be repeatedly re-bleached, but this is something you may prefer not to do. In any case, the bleaching causes only a modest amount of whitening, and the disparity between your new caps and the bleached natural teeth is not likely to be great even if the bleached teeth darken.

Do you think your natural teeth are too dark? This is entirely a subjective judgement, and your opinion is just as valid as the dentist's. If you like the color of your natural teeth, skip the bleaching, and just have your dentist match the caps to them as they are. This is the basis on which you should base your decision whether to bleach.

Q: Why do some people's teeth discolor a yellow to brownish color upon aging? There are no injuries to the teeth. I have been told that it is just a part of aging?

Often it is just a part of aging. The surface enamel becomes worn and thin during a lifetime of chewing, allowing the underlying dentin (which is a darker color) to shine through, or even become exposed to the surface. The central pulp tissue becomes increasingly calcified and the surrounding dentinal tissue becomes sclerotic, darkening and opacifying the teeth. Recession of the gum exposes the root surfaces, which are often darker than the crowns of the teeth.

Of course, some people become less motivated to clean their teeth, or may become physically incapacitated. This can cause their oral hygiene to suffer, allowing the accumulation of extrinsic staining. All of this can contribute to darkening of teeth with age.

Q: I am a 20 year old female. My teeth are stained, their color is not yellow but grey. I think the stains are called "intrinsic". When I was a child I always got a cold or flu and had to use a lot of medication; I was injected mostly. I don't know whether it is the reason, but my teeth were like this all the time. What is strange is that sometimes there appear some white spots (not natural, too white); sometimes the stain becomes less. I guess it is connected with my behavior, i.e. eating, smiling a lot. Would you please explain to me what does this mean, and how can I make my teeth look brighter.

Intrinsic stain does not noticeably vary over short intervals; any change is gradual and usually escapes notice. If the stain you see is intrinsic, i.e. a staining of the tooth structure itself rather than a surface deposit of stained material, any changes you see are probably the result of some change in ambient lighting. You'd be surprised how important quality and quantity of light is in evaluating tooth color. It's an important consideration in dental practice, since dentists must frequently evaluate color and other optical qualities when matching restorative materials to natural teeth. Of course, what you are seeing may be some combination of intrinsic and extrinsic stain, which would further explain the variability in the appearance of your teeth.

Besides a thorough professional cleaning to remove extrinsic stain, your options are the same as anyone else with intrinsic dental stain: 1-bleaching, or 2-porcelain laminate veneers. One or the other may be more appropriate, depending on the severity of the stain, the uniformity of the discoloration, the structural integrity of the teeth, and the position and shape of the teeth. Your dentist will be able to discuss the pros and cons of these two approaches.

Q: Hi! You have been very helpful. I have been asking you about bleaching the teeth.I have been told that before getting my teeth bleached I should get them cleaned first (some receptionist told me that over the phone). Is that true? Is that what you recommend to your patients? To tell you the truth I have not had them cleaned in a while so I am sure it wouldn't hurt; I was just curious as to why. Will getting a professional cleaning remove some stains and maybe whiten them a little?

Getting your teeth cleaned prior to bleaching makes good sense, for two reasons:

- You might decide that your teeth don't need bleaching after you remove all that coffee/tea/cigarette stain.
- Bleaching agents must come into intimate contact with tooth enamel in order for them to work. This cannot happen if your teeth are covered by a layer of plaque or similar accretion.

Additionally, clean teeth are a virtue to which most people aspire. You don't want whitened dirt on your teeth--you want whitened teeth! Also, due to the slight postoperative sensitivity following bleaching, a good cleaning may be more comfortably performed prior to this procedure.

Q: My teeth aren't as white as I'd like them to be, even though I have them cleaned every six months as recommended. I drink 1-2 cups of very light coffee per day, and I'm wondering if I were to cut coffee out of my diet completely, would this help lighten the shade of my yellowish teeth, or is this "staining" due to the natural acids in my mouth?

The appearance of the teeth is due to a combination of their intrinsic coloration and that of any surface deposits.

The intrinsic color of the teeth can be assumed to be what you see immediately after a good professional cleaning, assuming all surface deposits have been removed. If this color is not what you'd like it to be, it's unlikely that eliminating coffee, smoking, or anything else known to cause surface stains will yield sufficient improvement. In this case, benefit can be derived from some other cosmetic treatment, such as bleaching or porcelain laminate veneers.

On the other hand, if the color of your teeth after professional cleaning is satisfactory, you'll need to be a bit of a detective in determining just what is responsible for the surface stain. Common offenders include coffee, tea, and tobacco.

Q: Hi! Is there any "home remedy" or over-the-counter product that actually will whiten my teeth? My insurance does not cover cosmetic issues. We do not have the money to spend on something like this since our new baby. I quit smoking over two years ago and I still have "smokers' teeth"...not heavily stained but still...yuk. Please help if there is help to be had! Thank you!!

You say you have "smokers' teeth". If the stain you have on your teeth is the result of smoking, it is a surface stain (extrinsic) and can be removed in the course of a dental cleaning. This is NOT a cosmetic procedure, and should be covered by most dental insurance. If stain remains after your cleaning, either your dentist/hygienist has not done it properly, or the stain is "intrinsic", i.e., it is part of the coloration of the tooth itself, and cannot be "cleaned" off the surface. This stain may also involve any resin (white) fillings in the mouth; due to their porous nature, stain can penetrate these fillings. If composite resin restorations are stained, replacing them will effect a cosmetic improvement (the newer resins are more color stable, and will also benefit from your newly smoke-free mouth). Dental insurance companies will seldom deny benefits for a simple operative procedure such as a resin filling, regardless of whether it is being done for cosmetic reasons. It is true that most, if not all dental insurance plans will deny benefits for dental treatment done for solely cosmetic purposes, but oftentimes a functional or structural reason for the treatment can be furnished to the insurance company in a narrative by your dentist with the claim form. For instance, if it can be demonstrated on x-ray that a tooth is structurally weakened by fracture, decay, previous fillings, or root canal treatment, insurance companies may provide benefits for crowns or laminate veneers. Unfortunately, no insurance policies to my knowledge will allow benefits for in-office bleaching. There are do-it-yourself kits to be had, but are either ineffective (due to their relatively low concentration of active ingredient) or unsafe, due to the unsupervised nature of their implementation with potentially caustic chemicals. We could not in good conscience recommend unsupervised home bleaching to you, even if bleaching is an appropriate approach for your specific problem.

A little gratuitous politicizing here: you say you "do not have the money to spend on something like this" and "My insurance does not cover cosmetic issues". If you truly believe that cosmetic enhancement is too capricious or frivolous to work into your personal budget, that is a legitimate conclusion that you are entitled to make. **NEVER** confuse an insurance company's determination of whether a service is *REIMBURSIBLE* with whether that service is necessary, appropriate, or advisable for you. The insurance company may be receiving your premium checks; your insurance may even be provided by your labor union dues. **IT IS NOT YOUR ADVOCATE!** Whatever moneys it doesn't pay out in benefits it gets to keep. Insurance companies deny many dental procedures in addition to cosmetics, based on the specifics of the policy fine print, for truly arbitrary reasons. Are you not going to have a needed root canal if insurance doesn't cover it? If you let them control the direction of your health care, **they have won!**

Q: I am planning on having 8 veneers done on my top teeth. I have visited a dentist that does not specialize in veneers, but does them. I then visited with a cosmetic dentist whose practice specializes in this. There is a significant price difference in the two dentists. I feel I would be better off having a dentist that does cosmetic work on a regular basis, even though the cost is more. I need an experts opinion and feedback.

It stands to reason that practice makes perfect, and a "specialist" could render a service at a higher level of expertise than a generalist. Keep in mind, though, that the dental profession at large (organized dentistry, or American Dental Association) only recognizes nine specialties in dentistry, and "Cosmetic Dentistry" is not one of them. Anyone can call himself a specialist in anything, but he'd be technically wrong. (There have been movements afoot to create specialties in implant dentistry, cosmetic dentistry, general anesthesia in dentistry, even SUPERgeneral dentistry, akin to the emergence of the "family practice" specialty from the general practice of medicine. There are academies in these fields, which have set up their own criteria for membership.) I'd ask the respective dentists if they have photographs of their cosmetic work. We dentist love to photograph our work-- our successes, anyway...;-)

BTW, the nine dental specialties are:

- Endodontics
- Prosthodontics
- Orthodontics
- Pedodontics
- Oral and Maxillofacial Surgery
- Periodontics and Oral Medicine
- Oral Pathology
- Dental Public Health
- Oral and Maxillofacial Radiology

Bad breath, bad taste and other unpleasantness

I maintain good dental hygiene - I brush teeth and tongue regularly and I floss. What can you recommend? I've tried various mouthwashes, but they don't seem to do anything. Particularly the ones with alcohol in. Is it possible that my saliva doesn't contain certain enzymes that normally destroy some of the bacteria on the tongue. Or could it be that my saliva just doesn't contain enough? Or perhaps there is something wrong with my tongue. The demand for products to deodorize and mask oral odors has never been greater; just witness the profusion of products on store shelves and advertisements for them in the media. While the need not to offend is a valid objective, the fact should not be lost that some odor is normal, while some may be a sign of something more significant. Below are reproduced a smattering of the many questions we receive on this topic.

Q: I often have a bad taste in my mouth and it seems to originate from the tongue. Whenever I brush it thoroughly it is okay for a short while. However, after a while or shortly after eating, my tongue seems to perhaps build up something on it. I don't often get a visible white coating, and often if I scrape my tongue, nothing will come off. It is at its worst in the morning when I wake up and late at night. In the morning I sometimes do have a residue on my tongue and have an unpleasant feeling/taste.

I would appreciate it if you could help me on this.

The source of oral malodor can be anywhere in the path of the airway, although the mouth is often the area first to garner suspicion.

One thing we have found is that a person is ill equipped to determine the presence or absence of his own bad breath. We have often encountered patients unaware of their own severe halitosis, and conversely, we have frequently encountered patients complaining of bad breath that we found to be undetectable.

The mouth is a warm, moist environment with a sufficient supply of organic nutrients to keep oral bacteria healthy, happy, and proliferating. We think that an instrument (toothbrush, dental floss, tooth pick, etc.) that is used and then thrust under the nose will always yield a detectable scent. Happily, this is not a common social activity!

What we are saying is that you may not have the problem that you think. "Morning mouth" is a common condition caused by the slowing of salivary flow during sleep. This permits the accumulation of desquamated epithelial cells, organic debris, and bacteria, which would otherwise be cleared from the mouth and swallowed. Everyone has this to an extent. Antimicrobial factors in saliva (enzymes and antibodies) are thought to be irrelevant to bad breath; it is more related to the volume of salivary flow.

You should discuss this issue with your dentist. He will be able to determine the extent of your oral malodor, and whether there is a dental basis for it. Be warned, though, that we have seen patients obsessively consult dentists, otolaryngologists, gastroenterologists, and endocrinologists in a vain attempt to find a cure for this problem which, in their case, did not exist in our opinion.

Q: For several years now, I have had small white formations appearing on my tonsils. After they have been there a few days, they eventually break free from the tonsil and I am able to spit them out. They smell absolutely foul! Can you explain what they are, why they form and any treatment available to stop them forming. I think they are referred to as "tonsilloliths"

I'm 25 and a non-smoker (if that helps).

Tonsils are collections of lymphoid tissue, usually located in their conventional locations (adenoids in the nasopharynx, lingual tonsils on the root of the tongue just anterior to the epiglottis, and the palatine tonsils between the anterior and posterior faucial pillars. Occasionally, tonsillar tissue occurs ectopically (in areas where they are usually not found).

Technically, the tonsils are not situated within the oral cavity, so a dentist is on shaky ground recommending treatment, but we'll tell you what we know...

The following applies to tonsils in general, but the issue is most noticeable on the palatine tonsils, since these are the only ones that are easily viewed. The tonsils are covered by the same type of tissue that lines the oropharynx and most of the mouth-- a layered epithelium that is renewed by growth of new tissue in the deeper layers and maturing as it is pushed up to the more superficial layers. The surface layers are of non-vital keratin, and continually slough, carrying with them any adherent bacteria and other organic material. Unlike other tissues, the surface contours of the tonsils are punctuated by deep pits and crypts that tend to retain and trap this exfoliated tissue, which is the mechanism by which these "tonsilloliths" develop. When the volume of this material exceeds the capacity of the crypt in which it is contained, it tends to be expelled. This material tends to have a fetid odor, since the presence of bacteria, moisture, and organic substrate provides perfect conditions for putrefaction. This material is not generally thought to contribute to oral malodor, since it is sequestered in its crypt away from the airway until it is expelled, after which it is cleared from the mouth quickly.

The only way to keep tonsilloliths from forming (that we know of) is to surgically remove the tonsils-- a rather aggressive approach, to be sure...

Q: What is that white or yellow stuff on my tongue? How do I avoid it?

Coatings on the tongue can come from any of a number of causes.

The surface of the tongue is studded with myriad bumps known as papillae. They come in three types: filliform, fungiform, and circumvallate. The fungiform and circumvallate contribute to taste perception; they are the larger bumps on the front or the back of the tongue respectively. The most numerous type are the small filliform papillae, which cover the majority of the dorsal (upper) surface of the tongue.

Sometimes the filliform papillae either hypertrophy (grow larger) or atrophy (grow smaller) as a result of chemical, endocrine, or microbiological factors. This will give rise to changes in the appearance of the tongue.

For instance, the habitual use of hydrogen peroxide-containing mouthrinses will cause the filliform papillae to grow, leading to a clinical condition elegantly known as "black hairy tongue."

Strep infection will sometimes take the form of scarlet fever (scarletina), which causes the filliform papillae to develop a white coating, allowing the fungiform papillae with their contrasting red color to create the characteristic "strawberry tongue" appearance.

A condition called benign migratory glossitis, also referred to as "geographic tongue", presents as islands of atrophied filliform papillae within areas of normal papillae, giving the tongue a map-like appearance.

Some people develop yeast infection (candida albicans) following administration of broad-spectrum antibiotics or if the immune system is depressed. This causes a white coating to appear on the tongue.

Sometimes the level of activity and/or salivary flow is not sufficient to remove exfoliated cells from the surface of the tongue, allowing them to accumulate and create a coating. This can sometimes be reduced by habitually brushing the tongue when you brush your teeth. Use caution to avoid gagging yourself, though!

As you can see, there are many things that match the description you present; the treatment must be tailored to your specific problem. If it persists, I'd advise a consultation with your dentist to clarify the nature of the condition.

Q: I got a bridge put in a month ago and I have this metallic taste in my mouth. I tried brushing my teeth, mouth wash--nothing seemed to work. Does any one have any advice on how to get of the metallic taste in my mouth?

Our patients sometimes complain of a taste with some base metal alloys used for bridges; this usually wears off within a few weeks.

The presence of a fixed bridge creates greater difficulty in proper oral hygiene, since floss cannot be introduced between the abutment teeth in the conventional way. Have your dentist or hygienist instruct you in how to use a floss threader or proxi-brush. This may help the problem. You might also ask your dentist to verify that all the excess hardened cement was properly removed from the margins of the crowns.

Q: I'm pretty attentive to matters relating to hygiene but I've become aware that I have bad breath. What can I do about it? I brush regularly and chew lots of gum. Thanks.

Bad breath can occur as the result of any malodorous condition within the respiratory tract, but as dentists, we realize this usually means a less than perfectly hygienic condition in the mouth. Good oral hygiene will not only include brushing regularly (the jury is out regarding gum chewing), but also regular flossing and professional cleaning. It may also involve the diagnosis and treatment of pathological conditions presently undisclosed, such as dental decay or periodontal (gum) disease, as these can contribute to oral malodor. We would also consider tobacco use as a common offender, both smoked and smokeless.

It is common knowledge that certain dietary practices will contribute to bad breath. Garlic consumption will add its distinctive bouquet both as a residue in the mouth and by distribution of its volatile constituents systemically through the bloodstream, thereby finding its way to the lungs and expired air. Coffee will create a disagreeable breath odor for some people. Additionally, certain metabolic conditions will yield a characteristic smell: extreme hunger, uncontrolled diabetes, uremia, occult gastrointestinal bleeding all cause odor.

Even if the cause of oral odors is not certain, it is useful to remember that the mouth is warm and moist, with plenty of organic material available to putrefy. All mouths have some odor; sometimes the best that can be hoped for is to minimize it. My advice would be to get a thorough dental examination and cleaning, treat any decay or gum disease that is found, maintain scrupulous oral hygiene, and only after you've taken care of that should you look for some more exotic cause for the bad breath.

Q: How do I get rid of garlic breath? Please help quick!

The only way to get rid of garlic breath is not to eat it; that's sometimes difficult to do, since it is not always obvious that what you're eating has garlic.

Sorry if this answer was not timely enough to help you out of your apparent predicament. In the future, you might insist whoever is in your company to consume a clove of garlic immediately; that person's garlic will cancel out your garlic--some kind of corollary of Newtonian physics or something like that ;-)

Oral Hygiene

A properly implemented home oral hygiene program will do more to promote and maintain the oral health of our readership than anything else. *ANYTHING!* Now **listen up!**

Q: What would you say is the best toothpaste that doesn't injure the teeth or gums and whitens?

Most dentists agree that toothpaste does little more than improve "mouth feel" and provide flavor while brushing the teeth. Far more important is the way the teeth are brushed, and the type and condition of the toothbrush.

Some toothpastes make claims of brightening the teeth, but they do so only to the extent that they help remove adherent stain. Oxygen-based bleaching agents are not chemically stable enough to be included in toothpastes in sufficient concentration to bleach to any degree.

Some toothpastes are specifically made to remove heavy stain, and are frequently referred to as "smoker's toothpaste" or "tooth polish". This is a red flag that the toothpaste may be excessively abrasive, and may cause progressive wearing away of the tooth and supporting tissues. These toothpastes are to be avoided.

Some toothpastes have therapeutic agents added, such as fluoride (sodium fluoride, stannous fluoride, sodium monofluorophosphate), or desensitizing agents (potassium nitrate, strontium chloride), and may be of additional use for those prone to either decay or dental hypersensitivity. These products may be endorsed in the U.S. by the Council on Dental Therapeutics of the American Dental Association. There may be other sanctioning bodies in other countries, but I am not knowledgeable about them. Likewise, different toothpastes may only be commercially available in certain locations. It is more practical simply to consult your local dentist for recommendations. In most cases, though, it's more effort than the issue merits; toothpaste, for the most part, is simply toothpaste.

Q: I am a second year dental student at the University of Glasgow in the UK and have been asked to research the basis of action of mouthwashes. Could anyone give me any information to help me or tell me where I might look. Thanks.

Mouthwashes may be broadly divided into several therapeutic groups:

- antiseptic rinses for oral malodor or periodontal disease
- fluoride rinses for decay prevention
- anesthetic or analgesic mouthrinses

Most antiseptic rinses are of limited effectiveness, since their antimicrobial effect is of very short duration. The exception to this is chlorhexidine gluconate, which has a persistent effect.

Fluoride rinses are considered an adjunct to other decay prevention measures.

Analgesic mouthrinses are appropriate for palliation of symptoms of oral inflammatory conditions.

Q: Since marrying and moving to my wife's home state 3 years ago, I've been plagued with constant canker sores. My most recent has been on the floor of my mouth. When I examined the sore, I was shocked to find that my gums had changed from a healthy pink to a dark red! Since both of my gums exhibit this new color, I doubt that it is related to the canker sores. I brush at least once daily, though I rarely floss. Is this darkening of the gums an early signal of gum disease, or could it be linked to the sores?

P.S. - Another quick question. A professor at college taught our class that because bacteria in plaque need 24 hours to begin to decay teeth, brushing teeth once a day was sufficient. Any thoughts on this? Thanks for the help!

Darkening of the gums is a sign of periodontal disease, though not necessarily an early one. It is most probably unrelated to the canker sores.

Not flossing can be considered a major omission in your oral hygiene regimen. At least you know where you need to apply more effort! If the discoloration doesn't go away, I would bring up the issue to your dentist at your next appointment.

The process of decay is not an all or none mechanism; there is a chemical equilibrium between the dental enamel and saliva. The decalcification and recalcification of enamel goes on all the time, and any shift toward one or the other can produce a net change in mineral density. There is no one moment when decay can be said to start. Why take chances? Besides, there are other benefits to oral hygiene besides decay prevention. Isn't a clean mouth a worthwhile objective in itself?

Q: Is it better to floss before you brush your teeth or after you brush your teeth? My dental hygienist says either way is OK. Is she correct or is one way better than the other?

I think most of my colleagues would agree that we're happy when our patients floss and brush; we can't afford to be too fussy about the sequence.

There is a rationale for recommending that flossing be done first if you are using a fluoride toothpaste applied to a toothbrush. Fluoride can only provide a benefit to tooth enamel if it comes into direct contact with enamel. While you brush with the fluoride toothpaste, the bristles remove the plaque covering the surfaces accessible to the toothbrush, which can then benefit from the fluoride. The same can't be said for the surfaces between the teeth, which are covered by a thin film of dental plaque which serves as a barrier to the fluoride. However, if you have flossed before application of fluoride toothpaste, these surfaces between the teeth can benefit from the fluoride as well.

Q: Are there any improvements that can be made in the use of triclosan in Colgate Total?

The use of triclosan in toothpaste (and other common household products) is a somewhat controversial issue. Studies have demonstrated that bacteria can develop resistance to the antimicrobial effects of triclosan, as they do in the case of antibiotics. This not only limits the long-term effectiveness of triclosan, but has implications for the development of pathogen resistance to similar chemical antimicrobials in treatment of more serious conditions.

Q: Does the Braun 3-D plaque remover really remove plaque? Does this do a better job of cleaning your teeth than a regular toothbrush?

Electric toothbrushes can be useful for those with physical disability or poor manual dexterity. I resist recommending these devices otherwise, since they do not produce an improvement in oral hygiene commensurate with their expense and complexity. This is always important to consider in a routine that has always demonstrated poor patient compliance.

In short: keep it simple! There's nothing these modern-day wonders can do that conventional brushing and flossing can't at a fraction of the cost and complexity.

Q: I am in a quandary: tartar builds up very quickly (in a matter of a week or so despite careful brushing and flossing twice or three times a day and the use of a water pik) at the bottom of my lower front teeth on the tongue side. Obviously I cannot go to the dentist for a cleaning every week or so. Therefore my choice is between leaving it until my regular cleanings at the dentist every 6 months or removing it myself from time to time with the type of metal toothpick sold in drugstores (it comes out easily in one piece and I am careful not to do myself any harm, but I still have to scrape a bit). What I am worried about is that this very minimal scraping could cause my gums to recede further (they are already receded on those teeth in a V shape); on the other hand, if I wait for my regular cleanings at the dentist (even if I increase the frequency of my visits to every 4 months) the tartar could cause caries to begin. There seems to be no good solution; so the question is which option is preferable and why?

While on this subject I have another question, I have read that a dry toothbrush is more effective in removing plaque probably because a dry brush is less soft than a wet one; but isn't this advantage offset by the risk of receding gums when the brush is less soft?

We discourage patients' use of sharp metal dental instruments on their own teeth; there is the potential for injury. Interestingly, tartar does NOT cause caries, although it may seem intuitively that it would. The tartar may, however, contribute to periodontal (gum) disease, so it should be removed periodically.

Every dentist has encountered the problem you describe, and there is no one good solution. Patients under the care of a periodontist (gum specialist) are now typically given a recall interval of every 3 months. This does,of course, present the question of whether the disease or the cure is worse for some people.

In our experience, patients who form a lot of tartar will form it regardless of the effort they claim to employ in its prevention. We do find though, that there is almost always room for improvement in a patient's oral hygiene technique.

In the matter of a wet versus dry brush, it's probably not important. The brush will become wet with saliva and soften soon after being placed in the mouth. What correlates more closely with tooth abrasion and gum recession is the hardness of the brush bristles, the abrasiveness of the toothpaste, and the technique used in tooth brushing. Ask your dentist or dental hygienist to instruct you in the proper approach. It's the most important thing you can do yourself to improve your oral health.

Q: Why do I gag when I scrape my tongue??? I think its great hygiene. Thanks!

Gagging is a normal protective reflex. It serves the purpose of ejecting a foreign object that threatens to fall into the respiratory tract, which would be a grave occurrence. People vary in the irritability of their gag reflex. This is a problem that we as dentists must deal with on a daily basis when we take x-rays, take impressions, etc.

It is impractical to abolish the gag reflex. Regardless of just how active a person's gagging may be, they usually can only brush a small portion of their tongue before inducing gagging. The tongue extends quite a bit behind the part which is readily visible, and nearly all will gag if its posterior regions are stimulated.

Your attention to oral hygiene is commendable, and brushing of the tongue will reduce the total bacterial count in the mouth. The consensue among dentists is, however, that the bulk of your hygienic efforts should be reserved for the teeth themselves. This will reduce your susceptibility to both decay and periodontal disease. Brush your tongue if you wish, but don't worry if you can't brush the whole length of it. None of us can!

Temporomandibular Joint

Perhaps no pathological entity is as troublesome to both its sufferers and the dental profession as temporomandibular joint pain, or TMJ. Its validity as a legitimate diagnosis, as well as its precise definition and the appropriate therapeutic approach is the stuff of controversy, if not rancor.

Q: What is TMJ exactly? I went to my dentist complaining of a sore ear and throat, and she told me that my lower wisdom tooth was impacted and needed to be removed in a hospital. I waited merrily suffering for 3 months for a hospital appointment, only to be told by the specialist that, "I am not going to remove your tooth and that I think you have TMJ". What does this mean, as he thinks I am suffering from stress (don't know how he made the diagnosis, as I am sure he is not a psychologist as well. I assure you I am not suffering from stress, just a plain old sore tooth and ear.

TMJ is an acronym meaning "temporomandibular joint", the joint in which the lower jaw articulates with the base of the skull. In popular parlance, the abbreviation is applied to the putative condition known as temporomandibular joint dysfunction syndrome. It is a diagnosis of exclusion, often used when no other organic basis for a certain constellation of symptoms can be found. Although TMJ is often associated with ear pain, it also would include several other symptoms, such as limited range of opening of the jaw and joint noise. Although TMJ syndrome is often associated with stress, the actual causal relationship between the two is unclear.

You are right to be suspicious of the surgeon's dismissive attitude; it shows a casual attitude toward diagnosis, which is the cornerstone of good dental treatment. Indeed, pain can refer from the ear to the jaw, as well as the reverse; this may allow a possible non-dental cause for your symptoms. You may want to have your physician check out the condition of your ear, just to cover all your bases. If that proves fruitless, you may want to ask your dentist for referral to another oral surgeon for a second opinion. Your symptoms are not inconsistent with a pericoronitis, which can be caused by a partially impacted wisdom tooth.

Q: My orthodontist told me 9 years ago that I had beginning stages of TMJ--the jaw clicking and so forth. The headaches are getting worse, and I should probably do something about it, but from all I've heard there are few options. If you do the appliances there is no guarantee it will help and my insurance policy will only pay up to $2500.00 one time, period. I don't want to lose what help the insurance can give me on a procedure that may not fix it, but neither do I want to continue living with these headaches that won't go away for days at a time. What are the true options?

Temporomandibular Joint Pain Dysfunction, myofascial pain dysfunction, (TMJ, TMD, MPD) is a controversial diagnosis, and does not correlate well with organic and structural disease. Most people have some degree of joint noise, and this alone does not constitute a diagnosis of TMJ, nor is a headache necessarily caused by TMJ. Your concern about the effectiveness of treatment is not inappropriate. You should not be in such a rush to start simply to maximize insurance benefits.

We would recommend you have a thorough diagnosis before you begin to chase treatments that may be inappropriate for your malady. There are usually some interdisciplinary head and neck pain practices and clinics associated with universities and hospitals. These practices have the advantage of approaching a diagnostic problem from the diverse perspective of multiple medical and dental specialties, and can give consideration to many potential causes of your headache, not just one (as would be the case of an orthodontist).

Q: I grind my teeth quite heavily in my sleep and at a fairly young age, I'm 43, I am already having difficulty with breakage and chipping. All of my front teeth have visible cracks. My dental insurance specifically disallows treatment for TMJ or any condition stemming from it. I have been told that bruxism is such a condition. Is there anything I can do myself as a palliative remedy for this problem? Would a sports type mouthpiece be of any help?

A sports mouth guard would prevent damage due to bruxism by preventing contact between upper and lower teeth, but it's unlikely you'd be happy sleeping with one. The relatively imprecise fit and bulk of these appliances make them uncomfortable for prolonged use. As a matter of fact, many dentist-made nightguards aren't so comfortable to wear, either, and many that are made don't get worn. Still, a professionally made night guard stands a better chance of being tolerated.

Other than that, reducing environmental stress is postulated to reduce bruxism, but this is not often possible...

As far as your dental insurance "disallowing treatment", that is not quite accurate. They are disallowing benefits for treatment. That doesn't mean you cannot have any such treatment done. There was a day (before the advent of dental insurance) when people willingly (if not happily) paid out of pocket for their health care. The fact that certain types of health care service are not reimbursable does not mean that such treatment isn't legitimate, appropriate, or even necessary. There is only one factor considered by insurance companies when deciding if a service is reimbursable - the bottom line. You should remember this the next time an insurance company "denies treatment".

Q: For several years, on and off, I have had the problem that at night, I grind my teeth in my sleep or just as I am about to fall asleep. I cannot even tell that I am doing it except that my girlfriend always wakes me to stop me. It began during a stressful period in my life which is long over. Unfortunately, even though I am on the whole happy and live a largely stress-free life, the tooth-grinding continues.

Does anyone have any advice? I want to stop doing it rather than wearing a dental apparatus as I have heard some people do.

There is no one way that is consistently effective in eliminating bruxism (tooth grinding habit). The best that can be offered is a night guard appliance that discourages the habit and limits damage to the teeth, joints, and periodontal tissues.

Usually, bruxism is idiopathic, that is, of unknown cause. Commonly, it is associated with physical or psychological stress. Occasionally, a subtle bite discrepancy can be diagnosed which will trigger a tooth grinding habit, but this is not often the case. Still, it's sometimes preferable to try a limited bite adjustment (occlusal equilibration) than to wear a night guard as a first attempt at treatment. We'd advise you to have your dentist check for occlusal interferences; failing that, try a night guard...

Q: What is TMJ?

TMJ is an abbreviation for temporomandibular joint; the term is sometimes used to refer to maladies apparently centered around the functioning of this joint. The TMJ is the joint which permits movement of the lower jaw (mandible) relative to the bones it articulates with at the sides of the skull (the temporal bones). TMJ dysfunction (sometimes called MPD, or myofascial pain dysfunction) is a problematic, controversial diagnosis. It is generally a diagnosis made by a process of excluding other pain syndromes and pathologic states that have more objective signs and symptoms. It can manifest as pain, limitation of jaw movement, and joint noise. The causes are also poorly defined; the same factors that are frequently blamed are often found in subjects with no sign of disease. Demographically, it is predominantly found in adult females between the ages of 25 and 60 years. Due to the fact that the causes of TMJ dysfunction syndrome are poorly understood, the modalities of treatment are controversial, and may include night guards, bite adjustments, muscle relaxants, and physical therapy. As is the case in many chronic pain conditions that don't yield well to treatment, victims of TMJ are frequent targets of practitioners offering therapy of dubious virtue. This is understandable, since "mainstream" therapy can't offer much more...

Zoom Whitening

Q. What is Zoom! tooth whitening?

A. Zoom whitening is a bleaching process which lightens the discolouration of the enamel and the dentin.

Q. How long does Zoom! Chairside Whitening take?

A. The procedure takes less than an hour. The procedure period begins with a preparation period followed as little as by 45 minutes of bleaching.(A cleansing is recommended prior to the actual Zoom! whitening session.)

Q. How does the Zoom! In-Office system work?

A. The Zoom! light activated whitening gel's active ingredient is Hydrogen peroxide. As the hydrogen peroxide is broken down , oxygen enters the enamel and dentin, bleaching coloured substances while the structure of the tooth remains is unchanged. The Zoom! light aids in activating the hydrogen peroxide and helps it penetrate the surface of the tooth. A study has shown that the use of Zoom! lamp increases the effectiveness of Zoom! gel by 26% or more, giving an average improvement of up to eight shades.

Q. What will I experience during the Zoom! In-Office Procedure?

A. During the procedure, the patients may comfortably watch television or listen to music. Individuals with a strong gag reflex or anxiety may have difficulty undergoing the entire procedure.

Q. How long do the results last?

A. By following some simple post whitening care instructions, your teeth will always be lighter than before. To keep your teeth looking their best, we recommend flossing, brushing twice a day and occasional touch-ups Zoom! Weekender or Nite White Gel. These are professional formula products designed specifically to keep your teeth their brightest. These are available only through your dental professional.

Q. Are there any side effects?

A. Sensitivity during the treatment may occur with some patients. The Zoom! light generates minimal heat which is the usual source of discomfort. On rare occasions, minor tingling sensations are experienced immediately after the procedure, but always dissipate. You can also ask your dentist to supply you with anti-sensitivity toothpaste for use prior to treatment.

Q. What causes tooth discolouration?

A. There are many causes. The most common include aging and consumption of staining substances such as coffee, tea, colas, tobacco, red wine, etc. During tooth formation, consumption of tetracycline, certain antibiotics or excessive fluorides may also cause tooth discolouration.

Q. Do many people whiten their teeth?

A. More people than you might imagine. A bright sparkling smile can make a difference for everyone. The Zoom! Chairside Whitening makes it easier and faster than ever before.

Q. Who may benefit from tooth whitening?

A. Almost anyone. However, treatment may not be as effective for some as it is for others. Your dental professional can determine if you are a viable candidate for this procedure through a thorough oral exam, including a shade assessment.

Q. Is teeth whitening safe?

A. Yes. Extensive research and clinical studies indicate that whitening teeth under the supervision of a dentist is safe. In fact, many dentist consider whitening safest cosmetic dental procedure available. As with any tooth whitening product, Zoom! is not recommended for children under 13 yrs of age and for pregnant or lactating women.